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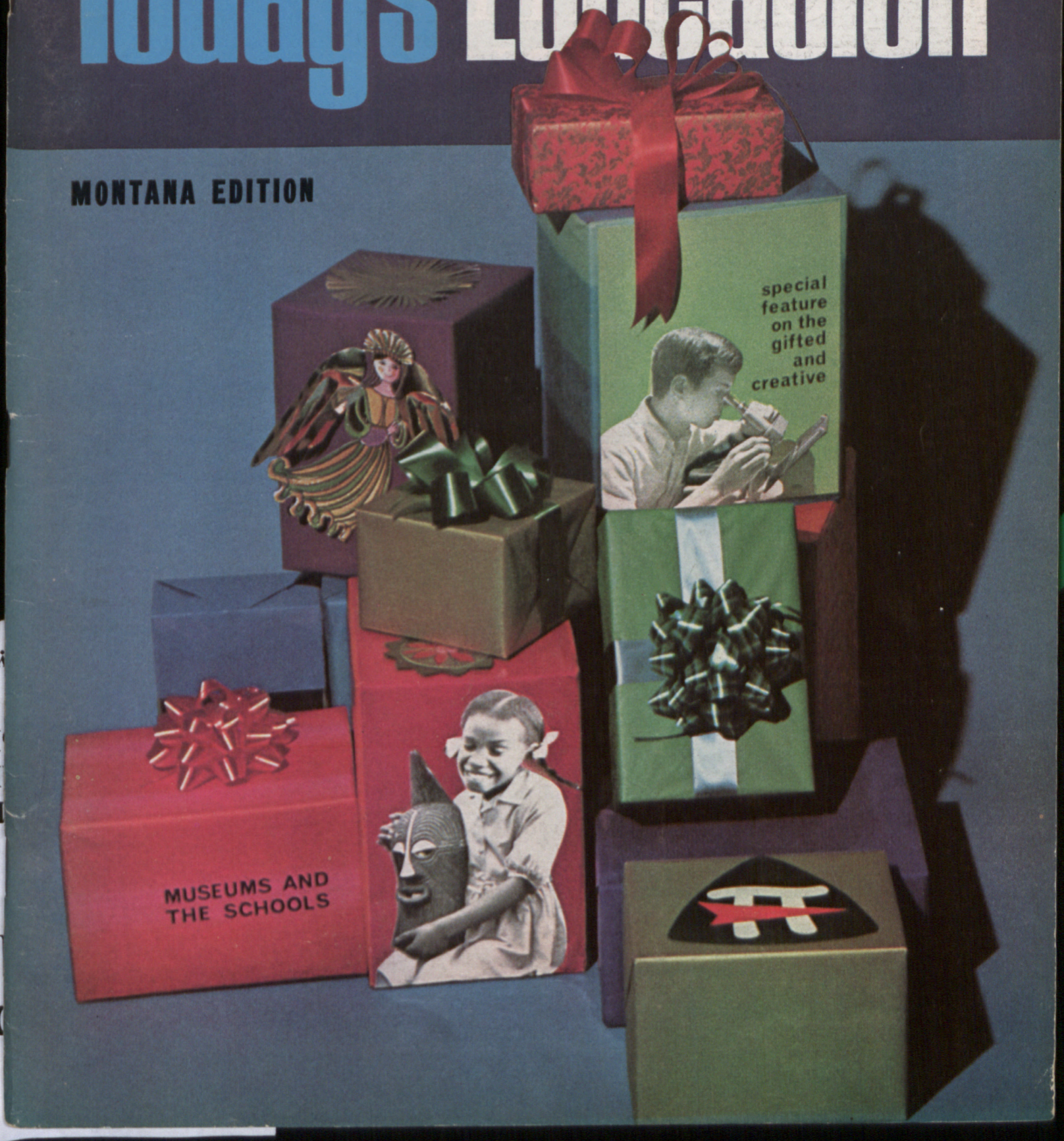
Today's Education

MONTANA EDITION



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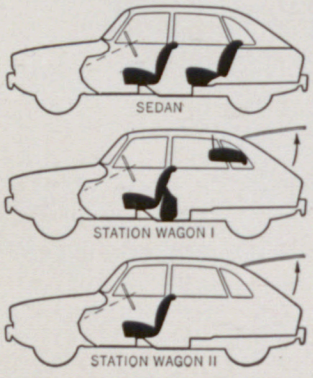

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Council Sees Almost No Hope for Southern Desegregation

Study Reveals Shortcomings in the Teaching of English

State Support of Colleges Rises

More College Disturbances Seen

Taxpayer Suit Challenges Federal Aid to Colleges

School-to-School Program Grows

NEWS AND TRENDS

Council Sees Almost No Hope for Southern Desegregation

Southern schools will probably never fully desegregate, according to the Southern Regional Council. There is "virtually no reason to find optimistic words, to say things may improve," the Council reported this fall, adding that "freedom-of-choice was a fatal blunder," which has failed in almost every instance to abolish segregation. It stated that the federal government's chief weapon to enforce desegregation —the withholding of funds—has not worked.

Study Reveals Shortcomings in the Teaching of English

A recently completed four-year study of 158 high schools in 45 states pinpoints severe shortcomings in the teaching of English in the nation's high schools. Cosponsored by the National Council of Teachers of English and the University of Illinois, and funded by the U.S. Office of Education, the study discovered that two of the areas of greatest weakness are reading and writing. The study considers that these conclusions (based on detailed investigations of 1,600 classrooms in schools with far-better-than-average English programs) are essentially valid for most high schools.

The study describes the deficiencies as follows: Reading programs are "inadequate, uncoordinated, and almost nonexistent." There is very little direct instruction in writing. There is widespread neglect of the nonacademic, noncollege, slow-learning student. Although contemporary literature is more significant and relevant to students, a majority of the schools studied "tend deliberately to de-emphasize major 20th century American fiction." Further, "Few teachers show themselves capable of effectively leading class discussion."

A few outstanding teachers, more than any other single factor, can make a good English program, the study says. It also emphasizes that quality leadership from the principal and chairman of the English department is essential.

State Support of Colleges Rises

State support of higher education reached $5 billion this year, according to a report by the National Association of State Universities and Land-Grant Colleges. The association reported, however, that "despite apparently large increases in appropriations, state and land-grant universities throughout the nation are faced with dangerous threats to their quality and to the educational opportunity they have long provided citizens of this country." Public higher education still is not receiving the support it must have to keep up with rising costs and demands, the association concluded.

More College Disturbances Seen

An end to disturbances by college students is not in sight, according to trustees who attended the annual conference of the Association of Governing Boards of Universities and Colleges this fall in Denver. A poll of 200 trustees showed that 43 percent expect an increase in student uprisings, 31 percent predict they will stay about the same, and 26 percent anticipate a decrease. Many trustees say they believe students should be included in trustee meetings and in discussions about university policies.

Taxpayer Suit Challenges Federal Aid to Colleges

Federal construction grants to four Catholic colleges and universities in Connecticut were challenged in September in a taxpayer suit filed in Federal District Court at New Haven. The suit was brought in hopes of testing the applicability of the Constitution's First Amendment to the principle of federal aid to education.

The suit challenges the awarding of funds under the Higher Education Facilities Act of 1963 for the construction of laboratories and library, science, and art buildings at the four institutions. The plaintiff's case argues that grants made to sectarian schools under the act constitute "governmental financing of religious groups and governmental action whose primary effect is to advance religion."

School-to-School Program Grows

Four new pairs of American and foreign schools joined the School-to-School Program this fall, bringing the total to 58 pairs. The schools share curriculum materials and set up exchange programs for their students and teachers. The program is currently sponsored by the American Association of School Administrators and the U.S. Department of State's Office of Overseas Schools.

U.S. citizens living abroad organize the overseas schools with the cooperation of the host country. The new pairings bring together schools

Today's Education

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Montana Edition

This edition contains a special colored-paper section prepared in cooperation with Andy R. Oja of the Montana Education Association. See pages 53-60. The Montana article on pages 58-60 is also appearing with articles from the New Mexico and Michigan editions in the general edition of TODAY'S EDUCATION.

This month's cover

This special gift issue of TODAY'S EDUCATION features a festive cover—a colorful photograph designed by Gloria Kamen and executed by Douglas Chevalier. The holiday packages suggest the variety of articles offered this month: "Museums and the Schools," a special feature on the gifted and creative, and "Preschool Experiment in Appalachia."

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New York State Launches Teachers Reserve Program

Teachers Ask for Greater Voice in Training and Certification

More U.S. Teachers Go to Canada

Program Seeks Ways To Overcome Limitations in Pupil Environment

Program Attempts To Overcome Negro Dialect Problems

Names in the News

in Massachusetts and Italy, California and Taiwan, Arizona and Colombia, and Indiana and Kuwait.

New York State Launches Teachers Reserve Program

New York has begun a statewide effort to locate retired teachers and others who would like to work in the schools if they had the training. Called Teachers Reserve, the program is being launched by the New York State Education Department in four stages. First, the Department is seeking to survey persons available; next, it will attempt to find out what additional training these persons need. It will then try to provide this training through programs in cooperation with New York colleges. Finally, the Department will enroll the persons in teaching or auxiliary positions.

Teachers Ask for Greater Voice in Training and Certification

Teachers should have a greater voice in the training and certification of teachers. In fact, all Education Professions Development Act funds ought to be withheld "unless and until classroom teachers participate in the creation of certification and accreditation policy on the state level." That is the recommendation of 30 teachers who represented their profession at a recent meeting with U.S. Office of Education officials. The conference on teacher training was part of the new USOE program to involve teachers in federal education policies and decision making.

More U.S. Teachers Go to Canada

The number of American college and high school teachers taking teaching positions in Canada increased 400 percent from 1963 to 1967. Canadian immigration officials say that 857 such persons entered Canada in 1967; only 208 had entered four years earlier. Among the reasons the immigrants gave for moving were the near parity of teaching pay, the slower pace of living, and the opportunity for adventure.

Program Seeks Ways To Overcome Limitations in Pupil Environment

How and when can the young child best be helped to overcome the limitations of his environment? A project launched by the University of Florida in Gainesville will attempt to find some answers. Backyard play centers for two-year-olds and special instruction for their mothers is the basis of the the project, which hopes to break the cycle of educational poverty in lower socioeconomic communities. A grant from the National Institute of Mental Health will support the project.

The key to the program's operation is the "parent educator," a person from the same environment as the mothers and children, who is given special training in child development. In the expanded program, the parent educator will become director of backyard centers set up at homes of participating families. Once-a-week individual meetings with the mothers will complement the sessions with the children.

Program Attempts To Overcome Negro Dialect Problems

In a federally financed project to overcome the dialect problems of Negro students, schools in rural Wakulla County, Florida, are teaching English to children as if it were a foreign language. After the faculty was integrated, it was noted that performance in an English class taught by a white teacher was not as good as the performance of the same children in a French class, also taught by a white teacher. That fact, along with others, led to the conclusion that the problem lies in the school system's failure to communicate.

The teachers spent the summer identifying lingual variants that cause the county's dialect speakers to be considered unacceptable by outside-the-culture listeners and that limit their employment potential. First emphasis of the new program will be daily practice in pronunciation.

Dialect studies have also been undertaken in inner-city areas of New York City, Washington, D.C., Chicago, and Detroit. One of the studies has concluded that the speech patterns of children are not "careless, inconsistent, or awkward," as is sometimes thought, but that youngsters are being "careful, consistent, and graceful within the only dialect they know."

An article on this topic, "Speaking the Same Language" by Ruth I. Golden, appeared in the March 1967 *NEA Journal*.

Names in the News

Harold Howe II resigned last month as U.S. Commissioner of Education. He announced that he will join the Ford Foundation early next year as a director of education programs in India.

Neil V. Sullivan, Berkeley, California, superintendent of schools, becomes Massachusetts state commissioner of education next month. Dr. Sullivan went to Berkeley after serving as superintendent of the privately financed schools run in Prince Edward County, Virginia, when the public schools were closed in a desegregation struggle.

ZIP CODE 20036

This feature is an open forum for TODAY'S EDUCATION *readers. Ideas and opinions expressed here are those of the writers and not necessarily of the NEA. (When writing, please indicate school, position, and home address, including zip code.)*

Studying Literature—Challenge or Pleasure?

In answer to "Studying Literature Should Be a Pleasure, not a Challenge" by Thomas R. Stretton, Jr. [October], I should like to say that I have found that for many what is challenging may also be very pleasurable, very entertaining. Why must we minimize the ideals of good entertainment? Only in our best English courses will the finest of man's varied forms of wisdom in varied fields be held as the ideal of entertainment.

Our cultural heritage depends on the stimulation that a good teacher can give to a class.

—Charlotte McCormick, *substitute teacher, Lexington, Kentucky.*

The study of literature should challenge the student. It should challenge his critical abilities. It should challenge his sensitiveness by making him aware that many works have influenced man's actions through the centuries. It should challenge his awareness by presenting new insights into the experiences of man.

Literature that challenges contains the inspirational quality often lacking in literature that merely entertains. Furthermore, challenge in the study of literature does not preclude the sheer enjoyment of it as Mr. Stretton would have us believe.

Mr. Stretton is disturbed because the word *challenge* seems to convert education to a constant skirmish. Perhaps an occasional skirmish works to our advantage in keeping us alert and in stimulating interest in the classroom.

—Steven Graff, *teacher of English, Monticello (New York) High School.*

I believe that studying literature should be both a pleasure *and* a challenge. I believe that too much of the literature to which our students are exposed is designed merely to be enjoyed, with little or nothing to provide a mental challenge.

In the eleventh grade anthology that I use, the only truly demanding or intellectual material in the whole year's program consists of one unit on Thoreau and one on Emerson, the same Emerson that Mr. Stretton uses as a horrible example of "just plain dull" reading.

I have taught these two units for years with success in arousing the students' interests and keeping their attention. I attribute the success to the fact that these two supposedly "dull" men were thinkers of a high order whose thoughts were on the ageless and extremely timely issues of conformity versus nonconformity, the question of what life is all about, hypocrisy, morality, and the like.

—Karyn Joyner, *teacher of English, Myrtle Beach (South Carolina) High School.*

The pleasure that comes from studying great literature is too full and rich to be characterized by the word *entertainment.* Somehow this word implies an outside force at work on and manipulating the reader. He responds through no effort of his own and therefore is entertained. He is not a contributor to the experience. He has been worked on as a piece of clay is worked on.

The pleasure that comes from studying great literature is the thrill of accepting a challenge. A work that leaves my students cold before we study it is often a source of lifelong pleasure after we study it. This is because, on first reading, the student was expecting to be entertained. But after he realized that the work of art was only the author offering the reader a hand to explore the vast, unlimited sea of Self, and when he accepted the outstretched hand and experienced permanent growth, there was pleasure.

I like to define *entertainment* as momentary transcendence and *growth* as permanent transcendence. The latter is much greater than the former and brings far greater pleasure. Just so is literature that challenges much more pleasureful than literature that solely entertains. Thought-provoking literature demands a growth response and therefore brings about unending pleasure.

—Florence Boutwell, *teacher of ninth grade English, Bowdish Junior High School, Spokane, Washington.*

Mr. Stretton equates challenge with unrealistic, tedious labor and offers the extreme example of such pedanticism as spending an entire semester with an Emersonian essay.

I, too, feel that it is vital for students to "like" English. I feel that the entertainment potentials of good literature must be exploited to bring about an effective, relevant English program. But does this mean a diet of literary pabulum, or a skimming of the cream of a classic to give students the "entertaining" illusion that they have mastered the selection?

—G. B. Willis, *teacher of English and department head, Brea (California) Junior High School.*

Why must the study of literature be either a challenge *or* a pleasure? Is it, in fact, possible for the effective study of anything to be challenging without a significant element of pleasure, or pleasurable without the continuing seasoning of challenge?

Mr. Stretton, who admonishes his readers to realize that *entertainment* should not be considered a dirty word, should himself realize that *challenge* is not necessarily corrupt, either.

—William H. Schubert, *sixth grade teacher, Fairmount School, Downers Grove, Illinois.*

COMING NEXT MONTH

THE KEY WORD IS RELEVANCE—*a practical approach to the essential task of making curriculums more meaningful to all students.*

THE IMBALANCE OF NATURE—*a "Searching Mind" article that brings us up-to-date in the field of ecology and points out the dynamic interrelationships that exist in nature.*

SPECIAL FEATURE ON PROFESSIONAL NEGOTIATION—*a basic text for members who are involved with professional negotiation; rounds out our October feature on the same subject.*

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BIBLIOGRAPHY

Aerospace Bibliography. Annotated listing of books, reference materials, periodicals, and teaching aids. Coded for reading or usage levels for primary grades through college and adult. Indexed by authors and titles. 4th ed. 1968. 64 pp. 40¢. Cat. No. NAS 1.19:48. Supt. Doc.

Africa. A List of Printed Materials for Children. An effort to evaluate all in-print English-language materials for children on the subject of Africa. Includes items first published in the United States, Canada, England, New Zealand, Ghana, Nigeria, Kenya, Tanzania, and South Africa. Annotated and indexed. 1968. 76 pp. $1. Information Center on Children's Cultures, U.S. Committee for UNICEF, 331 E. 38th St., New York 10016.

Animal Books for Children. For K-12. Annotated. Indexed by titles and by subjects, such as beavers, birds, cats, sea life, wild animals. 1968. 61 pp. Free. The American Humane Association, P.O. Box 1266, Denver, Colo. 80201.

Appraisal: Children's Science Books. Reports on strengths and limitations of science books for children ages 4-15. With annotations, suggested age level, and two ratings for each book, one by a librarian and the other by a scientist. Five possible ratings range from *excellent* to *unsatisfactory*. 1968. 16 pp. Vol. 1, No. 2. $1.25. Children's Science Book Review Committee, Harvard Graduate School of Education, Longfellow Hall, Appian Way, Cambridge, Mass. 02138.

1967 Best Books of the Year. Fifty-six titles selected by the book review editors of the *School Library Journal* from the 3,000 new children's books published in 1967. Annotated. 1967. 12 pp. 20¢ cash and self-addressed, stamped envelope. Myrna Viverito, R. R. Bowker Co., 1180 Ave. of the Americas, New York 10036.

Outstanding Biographies for College Bound Students. Annotated list. Also leaflet on *Outstanding Fiction for College Bound Students*. 1967. 6 pp. Single copies free. American Library Association, Young Adult Services Division, 50 E. Huron St., Chicago 60611.

Suggested Readings in the Literatures of Africa, China, India, Japan. Annotated bibliography of non-Western literature. Indicates grade level, K-12, for works of drama, fiction, nonfiction, poetry, and folklore. Indexed. 1968. 126 pp. $2 ppd. Board of Education of the City of New York, Publications Sales Office, 110 Livingston St., Brooklyn, N.Y. 11201.

Translated Children's Books. Lists children's books translated into English from a foreign language and currently available from publishers in the United States. Annotated. Suggests age level for 4-14 years. Cross-indexed according to language of origin, author, and title. 1968. 84 pp. $2 ppd. Storybooks International, Inc., Box 156, Locust Valley, N.Y. 11560.

ELEMENTARY EDUCATION

Art Magic. Handbook with photographs of over 100 art projects easily made from scrap material, such as paper or plastic bags and papier mâché. Special sections correlate art activities and handmade games with language arts, social studies, and science. 1968. 48 pp. $1.25. #373, The Instructor Publications, Inc., Dansville, N.Y. 14437.

Behavior: The Unspoken Language of Children. Discusses some of the obstacles to understanding the meaning of behavior. 1968. 12 pp. 35¢. Publishing Department, Child Study Association of America, 9 East 89th St., New York 10028.

Catalog of Service Projects for Children. Indicates ways children can give service to family, community, different regions of the United States, and other countries. 1968. 12 pp. Single copies free to adult leaders. Children's Program, American Friends Service Committee, 160 N. 15th St., Philadelphia 19102.

Child Art. Compilation of classroom-proven techniques and suggestions. Includes the use of watercolor, finger paint, clay, printing, cut paper, plaster, papier mâché, and tempera. Stresses creativity. Illustrated. 1968. 101 pp. $1. Board of Education, Curriculum Division, Wichita Public Schools, Wichita, Kans. 67214.

Equipment & Supplies. Tested and Approved for Preschool/School/Home. For teachers, school administrators, and parents seeking guidance in buying educational materials for children. Suggestions by grade level, nursery through intermediate, and by classified lists, such as art and craft, basic classroom, and music. 1968. 120 pp. $1.50. Association for Childhood Education International, 3615 Wisconsin Ave., N.W., Washington, D.C. 20016.

A Guide for Beginning Teachers of Reading, Grades 5-8. Designed to help beginning teachers and supervisors as they work to improve the reading level of every child. 1968. 106 pp. $2. Curriculum Bulletin, 1967-68 Series, No. 6. Board of Education of the City of New York, Publications Sales Office, 110 Livingston St., Brooklyn. N. Y. 11201.

Pets Teaching Pictures. Set of 12 full-color teaching pictures with a resource sheet for each picture describing suggested aims, questions to ask, rhythmic activities, and stories. Also includes projects and references. For children ages three to six. 1968. 10¾ x 13¾. $1.98. Cat. No. A1538. David C. Cook Publishing Co., 850 N. Grove Ave., Elgin, Ill. 60120.

Poetry for Today's Child. Topical arrangement of 63 poems into motion and adventure, fanciful, togetherness, American, and nature. Includes poems of Shakespeare, Kipling, Carroll, and Field. Also presents a basic guide to poetry instruction and creative writing of original poems. 1968. 48 pp. $1.25. The Instructors Publications, Inc., Dansville, N.Y. 14437.

Push Back the Desks. Projects and techniques used by an elementary teacher to create a dynamic atmosphere for learning. Includes an arithmetic "olympics," learning parts of speech in a "grammar hospital," and taking imaginary geographical "excursions." 1967. 224 pp. $2. Citation Press, Division of Scholastic Magazines, Inc., 50 W. 44th St., New York 10036.

Science Adventures in Children's Play. Suggests experiences to invoke science interests of the child. 1968. 48 pp. $1. Play Schools Association, Inc., 120 West 57th St., New York 10019.

CONSERVATION EDUCATION

Conservation of Natural Resources. Natural resources, how they are related, and how to conserve them, both nationally and internationally. 1967. 80 pp. 35¢. Boy Scouts of America, New Brunswick, N. J. 08903.

Man . . . An Endangered Species? The latest conservation yearbook from the U.S. Department of the Interior. Considers land, water, mineral, and human resources in relation to the question, Is man polluting, overcrowding, plundering, and reshaping his own habitat into an environmental trap? 1968. 100 pp. $1.50. Cat. No. I 1.95:4. Supt. Doc.

Trees of the Forest—Their Beauty and Use. Answers questions about great American forest trees—where they grow and why, how they are used by man and other creatures. Also information about the National Forests and the Forest Service field offices. 1967. 24 pp. 25¢. Cat. No. A 1.68:613/2. Supt. Doc.

TEACHING OF ENGLISH

Folk Literature. Discusses the tradition and the art of storytelling. Reprint from *Top of the News* of the American Library Association. 1968. 8 pp. Single copies 15¢. ALA, 50 E. Huron St., Chicago 60611.

Herman Melville's Moby Dick. A chapter-by-chapter summary of the novel with

a commentary on each chapter, analyses of the principal characters, life and work of the author, a critical estimate of the novel, and topics for discussion and composition. One of a series of *Dell Spot Notes*. (Other titles include *Hamlet, Huckleberry Finn, Pygmalion, War and Peace*.) 1967. 92 pp. 95¢. Dell Publishing Co., Inc., 750 Third Ave., New York 10017.

Productive Press Relations. Covers basics ranging from how to prepare the copy for publicity releases to specific suggestions on where to get ideas for stories and how to get newspaper and TV media to use the releases and photographs. 1968. 72 pp. $2. National Public Relations Council of Health and Welfare Services, Inc., 419 Park Ave. South, New York 10016.

HEALTH EDUCATION

LSD: Some Questions and Answers. Presents a description of the drug's effects, gives recent research findings, and outlines current efforts to solve the problems of drug abuse. (Similar fliers available on marijuana, narcotics, and on amphetamines and barbituates.) 1968. 8 pp. Single copies free. PHS Publication No. 1828. Public Information Branch. National Institute of Mental Health, Chevy Chase, Md. 20203.

Nutrient Teaching Charts. Shows percentage of nutrients in recommended servings of four food groups. Eight color charts (16 x 22½ in.), leader's guide (8 pp.), and cube model to assemble. 1968. $2 set. National Dairy Council, 111 N. Canal St., Chicago 60606.

Thinking About Drinking. Prepared for young people as a basis for discussion of attitudes about drinking. Reflects the latest findings in alcohol research. 1968. 32 pp. 20¢. Public Health Service Publication No. 1683. Supt. Doc.

The "Truth" About Smoking and Health. Reprint from U.S. Senate proceedings in the *Congressional Record*. Comments on current magazine articles on cigarette smoking. 1968. 8 pp. Single copy free on request. Vol. 114, No. 51, S3415. National Interagency Council on Smoking and Health, Box 3654, Central Station, Arlington, Va. 22203.

Vision, Master Key to Man's Progress. Wall chart for teaching basic facts about vision to pupils ages 8 to 15. Covers how we see, the professional examination, and illustrations of optical illusions. Kit also has teacher's manual and student booklet, *Our Eyes and the Wonderful World of Vision*. 1968. 40 x 60 in. $1. Better Vision Institute, Inc., 230 Park Ave., New York 10017.

PHILOSOPHY

Contemporary Philosophy. A broad survey of 20th century philosophical systems. 1968. 43 pp. 60¢. Public Affairs Pamphlets, 381 Park Ave. South, New York 10016.

(Continued on page 8)

NEA SPECIAL SERVICES

For the second consecutive year the NEA Special Services Division is making available to members of the united teaching profession a discount book purchase offer. The books available through this program are current favorites of book lovers and reviewers throughout the nation. None of the books is a leftover, discard, or special edition. The majority of titles on this year's lists are new ones of widespread interest. By popular demand, some classics have been included from last year's list.

The listing is divided into various categories:

General Interest—selections, such as *The Essence of Security* by Robert S. McNamara, *The First Circle* by Aleksandr I. Solzhenitsyn, and *Bennett Cerf's Treasury of Atrocious Puns*.

Special Interest—selections, such as *Growth Opportunities in Common Stocks* by Winthrop Knowlton, *The Sportsman's Companion* edited by Lee Wulff, *How To Do Your Own Wood Finishing* by Jackson Hand, and *The New York Times Cookbook* edited by Craig Claiborne.

For Young Readers—selections, such as *Charlotte's Web* by E. B. White, *Little Bear* by Else Holmelund Minarik, and *The Little Fur Family* by Margaret Wise Brown.

Other items include books, such as *The Child from Five to Ten* by Arnold Gesell, M.D., and Frances L. Ilg, M.D.; *Predicting Reading Failure* by K. de Hirsch, J. Jansky, and W. Langford; *The Public Speaker's Treasure Chest* by H. V. Prochnow; and *Revolution in Learning: The Years from Birth to Six* by Maya Pines. There are over 50 titles in the listing to choose from.

Any NEA member who is also a member of his state and local education association (if he is eligible for such membership) may obtain books through the special purchase offer.

Selections available through the Special Services Division appeared in the October 25 issue of the *NEA Reporter*. Anyone wishing to receive the complete list of titles may do so by writing to: NEA Book Purchase, 1156 15th Street, N.W., Washington, D.C. 20005.

Watch this column for additional information about Special Services programs for members of the united profession.

TEACHER OPINION POLL

Community Control of the Schools

Should parent groups manage the schools their children attend? What do teachers think about such community control of the schools?

Teachers are quite definite about which areas of school operation are suitable for parent participation and which should be entirely school responsibility. In general, they believe that educational activities which touch the student's out-of-school life should be shared parent-school responsibility, but that aspects of education which call for professional judgment should be left to the professionals. Very few believe that parents should have full responsibility for school operations.

These findings come from a recent Teacher Opinion Poll which asked a nationwide sample of public-school classroom teachers this question:

"Do you believe that a representative group of parents from the school neighborhood should have full responsibility, responsibility shared with the school administration, or no official responsibility for the operation of the particular school their children attend?"

A list of different aspects of school operation followed so that respondents might indicate their opinions about each.

A large majority of teachers approved of parents' sharing in the planning and supervision of extracurricular activities; but in such matters as school staffing or decisions about methods and materials or teaching, most teachers said parents should not be involved.

Teachers do believe that the schools should be responsive to community views about the educational program in general. About one-half of the respondents said they thought parents should share in determining the curriculum offerings of the school and school budget allocations.

	Parent Responsibility		
	Full	*Shared*	*None*
Selection of administrators	3.2%	31.7%	65.1%
Selection of teachers	0.3	14.8	84.9
Selection of textbooks	0.3	20.9	78.8
Determination of curriculum offerings	0.4	53.3	46.3
Determination of curriculum content	0.3	33.8	65.9
Teaching methods	0.1	9.3	90.6
Determination of student extracurricular activities	4.4	78.9	16.7
Supervision of student extracurricular activities	7.5	77.2	15.3
Determination of school budget allocations	1.2	46.0	52.8

Opinions of urban teachers in general differ very little from those of their suburban and rural colleagues as to which areas of school operation are suitable for parent participation.

—NEA Research Division.

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FREE OR INEXPENSIVE

(Continued from page 7)

Work, Leisure, and the American Schools. A philosophical assessment of the ideology of work. Indexed. 1968. 178 pp. $1.95. Random House, Alfred A. Knopf, The College Dept., 501 Madison Ave., New York 10022.

SAFETY EDUCATION

Swimming and Water Safety. For Grades K-12. A guide for teachers and supervisors in planning effective programs of swimming instruction. 1967-68. 64 pp. $2. Curriculum Bulletin No. 12, Board of Education of the City of New York, Publications Sales Office, 110 Livingston St., Brooklyn, New York 11201.

Teach Teenagers To Drive at Night. Judging distances, changing a tire, use of a flashlight and emergency kits, dimming headlights, and other instructions. 1968. 15 pp. 25¢. National Research Bureau, Inc., Booklet Division, 424 N. Third St., Burlington, Iowa 52601.

SECONDARY EDUCATION

American Business History. Current interpretations and significant writings in the field. For secondary school teachers. 1967. 32 pp. 75¢. American Historical Association, 400 A St., S.E., Washington, D.C. 20003.

Drug Abuse: A Dead-End Street. A student's guide. Describes the various narcotics, how they are "pushed," the dangers of experimentation with hard and soft drugs and other harmful substances, the difficulties of overcoming addiction. For grades 7 through 12. Teacher's manual also available. 1967. 19 pp. Sample copy free. H. K. Simon Co., Publishers, Dept. ED-N-125, 98 Old Broadway, Hastings-on-Hudson, N.Y. 10706.

SOCIAL STUDIES

Disarmament and Arms Control. Survey of the problems and prospects of disarmament and arms control. 1968. 63 pp. 85¢. No. 187 of the Headline Series. Foreign Policy Association, 345 East 46th St., New York 10017.

Immigrants in American Life. Selected Readings. Views history through the eyes of contemporaries. Examines the way in which the people most involved have become part of the American story, traces their development, chronicles their troubles and achievements, and suggests present problems and prospects. Indexed. A volume in the *Life in America Series.* 1968. 182 pp. $1.60. Houghton Mifflin Co., 110 Tremont St., Boston 02107.

The Lincoln Tomb. Describes the funeral and first burial of President Lincoln, the building and rebuilding of the tomb, the attempted robbery of the President's body, and the reburials to the final interment in 1901. 1968. 28 pp. $1. Dorothy M. Cashman, Lincoln Tomb, Springfield, Ill. 62702.

The Meaning of the Constitution. Each article of the U.S. Constitution, the Bill of Rights, and other amendments are reprinted, then explained and illustrated or interpreted with current examples. 1968. 96 pp. $1. Barron's Educational Series, Inc., 113 Crossways Park Drive, Woodbury, N.Y. 11797.

Mind Your Money. Set of three leaflets covering when you spend, when you shop, and when you use credit. 15¢ per set. Dept. ACB, Money Management Institute, Household Finance Corp., Prudential Plaza, Chicago 60601.

Pupils Speak to Pupils Around the World. An international tape exchange. Gives details of the program and features a directory of educational groups interested in exchanging tapes for educational purposes. 1967. 85 pp. $2. Michigan Audio-Visual Association (a Dept. of the Michigan Education Association), Bureau of School Services, 401 Fourth St., Ann Arbor, Michigan 48103.

United States Postage Stamps, 1847-1967. Contains black-and-white illustrations of the stamps, and such information as why each was issued, its dimensions and color, what or whom it pictures, and when and where it was first placed on sale. Also additional data on stamps and other postal materials and services. 1968. 276 pp. $1.25. Cat. No. P 4.10:967. Supt. Doc.

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TEACHER EDUCATION

Effective Classroom Control. A teacher's guide, based on the experience of the author, Irwin O. Addicott of Fresno State College. Includes some suggestions for organizing to secure principles for classroom control that have proved helpful to many teachers, some pitfalls to be avoided, and some practical techniques which many have employed with success. 1968. 34 pp. $1.65. The Awani Press, P.O. Box 1971, Fresno, Calif. 93718.

How To Enhance Individuality in Learning. Report of an international seminar involving participants from Europe and the United States who discussed parents, the classroom teacher, technology, and how to get individuality in mass education. 1968. 12 pp. Single copies free. /I/D/E/A/'s Informational Services Division, P.O. Box 446, Melbourne, Fla. 32901.

Libraries and Youth: Cooperation To Give Service to Children and Young People. Symposium addresses on how to achieve cooperation to give library service to children and youth, the New Jersey library plan, and how schools and public libraries work together in Maryland. 1968. 45 pp. $2. Syracuse University Press, Box 8, University Station, Syracuse, N.Y. 13210.

Love and Humanity—Not Intellectual Freedom. Discussion for librarians on choosing books for teen-agers. Reprint from *Top of the News* of American Library Association. 1967. 8 pp. Single copies 15¢. ALA, Young Adult Services Division, 50 E. Huron St., Chicago, Ill. 60611.

TEACHER IN POLITICS

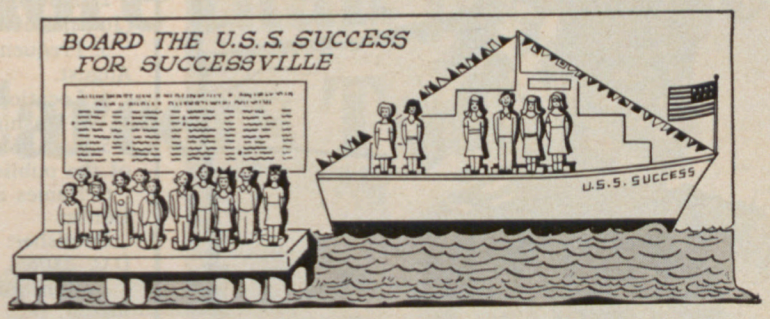
Now in his second term as mayor of Blair, Wisconsin, James R. Davis had his first success at the polls in 1964, when he was elected alderman on the Blair City Council.

A guidance counselor at Blair High School, Mr. Davis graduated from Wisconsin State University at Whitewater and received his M.A. from the University of Michigan. He was president of the Blair Education Association in 1962-63 and of the Trempealeau County Education Association in 1954-55.

Prior to his election as mayor in 1966, he served for many years on the board of directors of the Blair Chamber of Commerce and on the Blair Public Library Board.

—Lucinda O. Morken, teacher, *Blair (Wisconsin) High School.*

SUGGESTIONS
we hope prove useful



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By Mrs. Susie M. Pierce of Deweyville, Texas.

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DOCK AND SHIP—Poster board; paint with tempera; make partially 3-dimensional to allow stand ing room for the statuettes. The *dock* is 22″ x 4″ x 3″ made like a box lid. Tack and staple to bulletin board. *Pilings*—strips of poster board; extend from dock to water (water can be butcher paper). *Hull*—54″ at top; 47″ at bottom; height 16″ at bow; 12″ at stern; turn down 1″ and tack to bulletin board; turn up 1″ and staple to inside of hull, allowing bottom of hull to rest against bulletin board. The *Cabin*—9″ high, 25″ long at base, tack down flat. Fly paper flag and pennants.

STATUETTES—Each child constructs his own. *Stand*—strip of poster board, 1″ x 2″; bend inward on each end, paste together. *Body*—draw on paper, cut out, paste to stand. *Face*—could be snapshot or drawn. Color hair and eyes same as child's.

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NEA officers and headquarters staff: See *NEA Handbook*, pages 10-16; 423-24; and inside back cover. NEA platform and resolutions: *Handbook*, pages 66-68.

NEA departments: *Handbook*, pages 155-207.

NEA divisions, special projects, task force, commissions, councils, committees: *Handbook*, pages 94-154.

World Confederation of Organizations of the Teaching Profession: Information free from WCOTP, 1330 Mass. Ave., N.W., Washington, D.C. 20005; see *Handbook*, pages 382-84.

Graciela

Graciela is a shy and timid three year old—a Chilean child. Her family, losing everything and terrorized by the more recent earthquake, fled from its destruction and arrived in Santiago homeless. A struggling Protestant Day School, just affiliated with Children, Incorporated, noting their hunger and extreme need, let them occupy rent free a small wooden shack of one windowless room with a dirt floor. There are three beds for a family of seven but only one mattress and insufficient covering. TB germs lurk in the dust of summer and sticky mud of winter. The father, when he can secure work, makes about $30 a month. Graciela has been squeezed into the crowded day school which is trying to help her family.

Although the school manages to meet the Government's teaching standards, its buildings are flimsy, without electricity and in urgent need of repairs. 300 children are enrolled with 85 more approved for admission but money is lacking to accommodate them. Graciela, like the other children, exists under sub-human conditions. The lunch which the school tries to provide, is the nearest thing to a real meal cruel poverty permits to most of these children. Insufficient and improper food bloats their bodies and weakens and stunts their development.

Chile is a beautiful land with friendly people and bright, attractive children. But there are the Gracielas who have so pitifully little—they are "unfinished children". They have such potential. Their lives could be so changed if they could be helped even a little. They could blossom out into lovable, bright and capable youngsters. Graciela's life can be changed, like that of other similarly needy children, her whole future could be broadened and the worried look in her little face could disappear if she were sponsored under the CI "Adoption Plan". The cost of an "adoption" is the same as in all the CI projects around the world—$10 a month.

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Mildred S. Fenner, *Editor*

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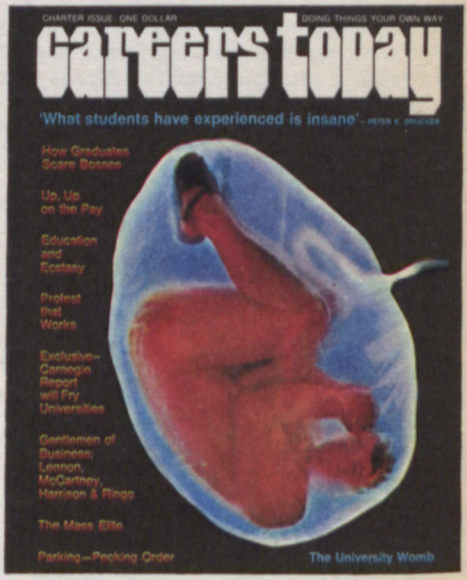
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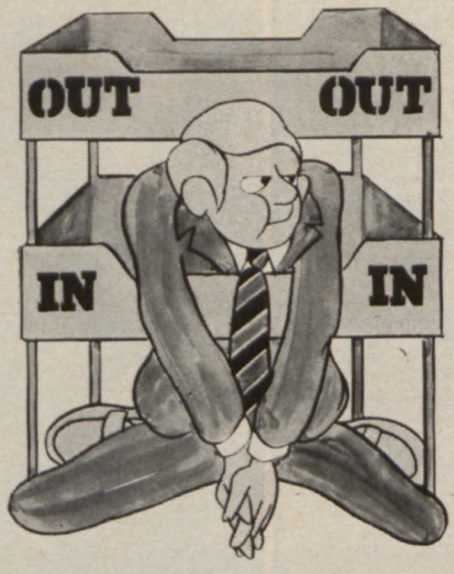

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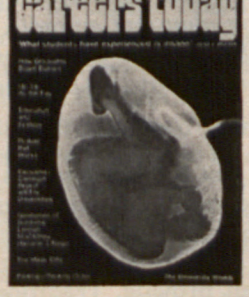

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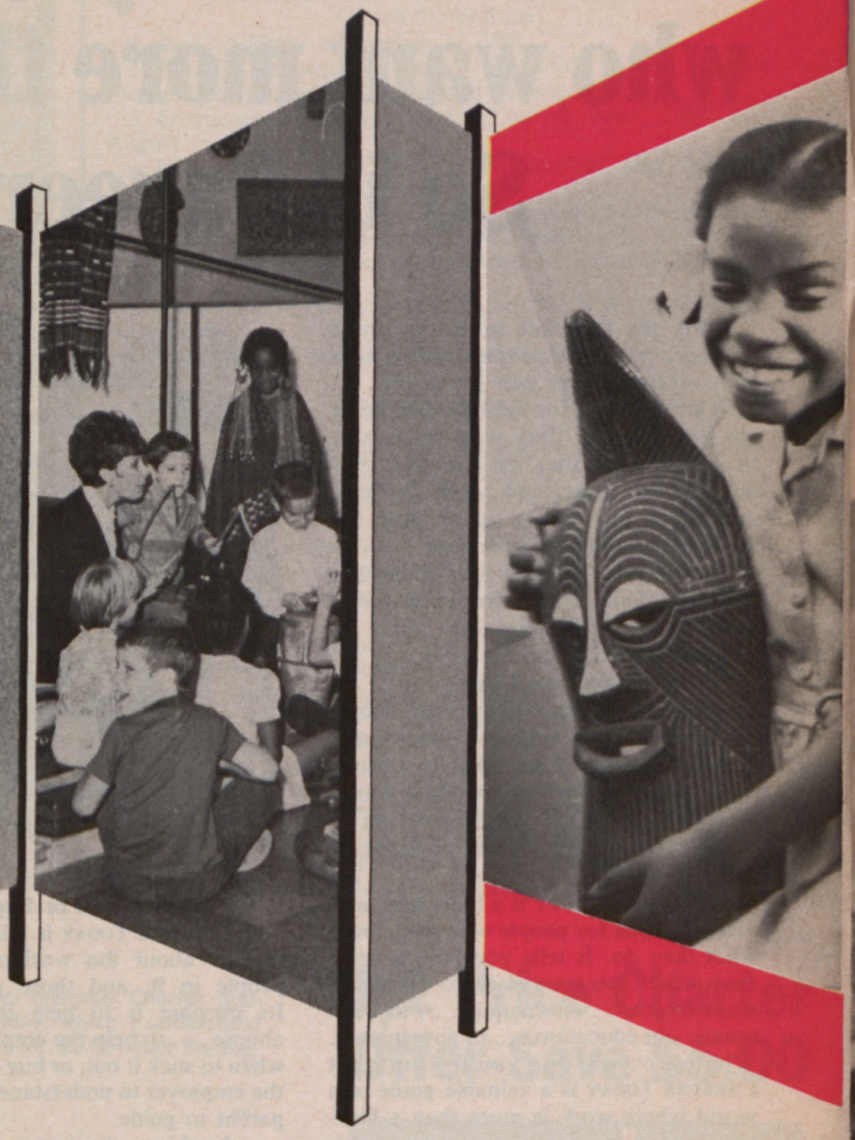


SUSAN PURVIS, *sculptress and teacher, Washington, D.C.*

• Rural students in Illinois are programed through a mobile art unit by automatically timed lighting and tape recordings.

As school children in Manhattan wander through an exhibit on the "Artist's Workshop," they swing color wheels; push buttons for recordings, filmstrips, and movies about artists' tools and techniques; peer through peepholes; and compete on a push-button machine to test their knowledge.

A small child gazes at the beehive in the Bedford Lincoln extension of the Brooklyn Children's Museum and asks, "Gee, lady, where can I get one of these?"

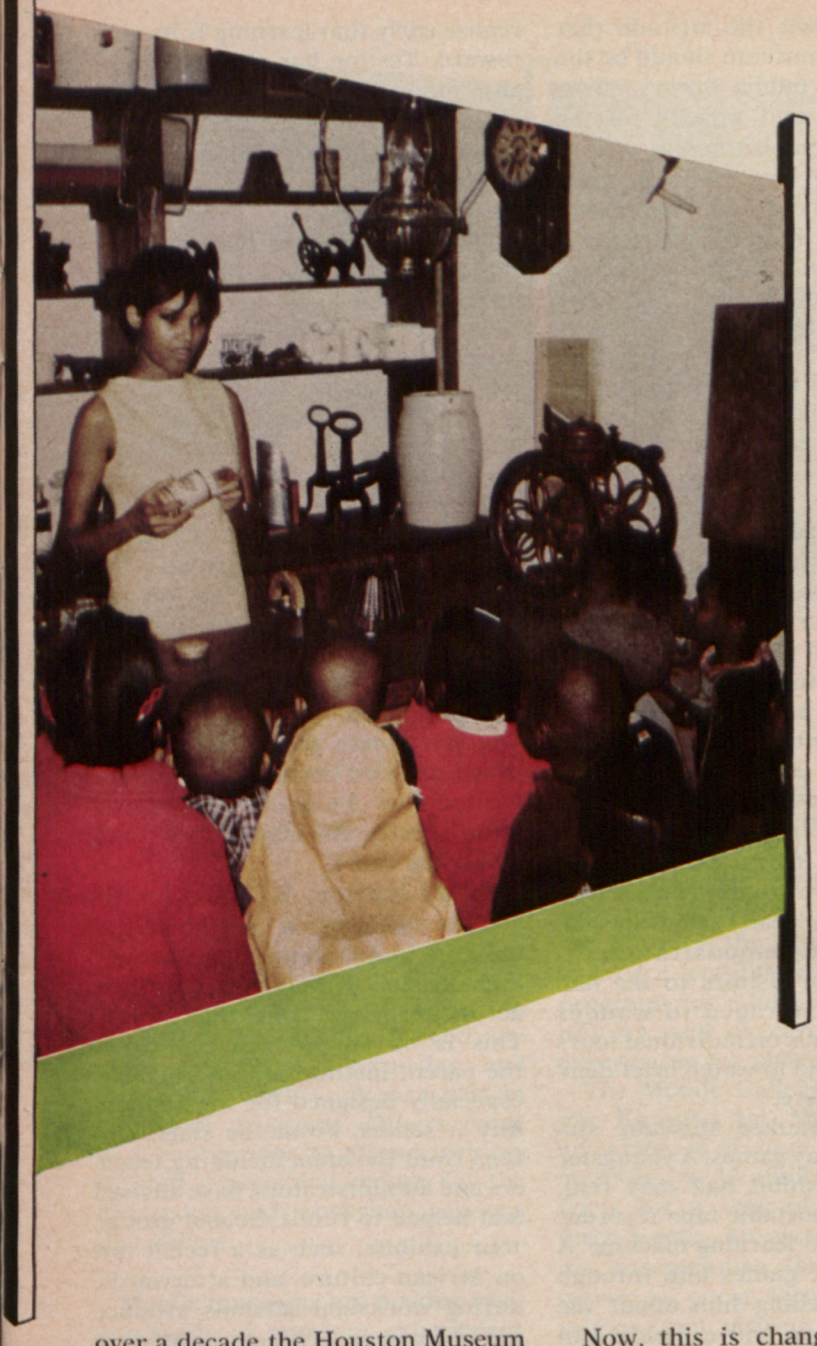
At Boston's Museum of Science, elementary teachers compete to be admitted to an annual seminar for nonscience majors.

In Washington, D.C., teachers work with curators from the Smithsonian and 20 children to develop a curriculum on man and animals.

Dayton, Ohio, creates an art museum for children in the basement of a school.

These are just a few examples of what is happening as school systems across the nation are turning to the museum to supplement what the classroom can provide. Traditional perfunctory school-museum contacts—special-occasion class museum tours, for instance—are giving way to activities that make museum experiences a regular part of the curriculum. All over the country, museum curators and teachers are working out ways to open channels of cooperation between people-filled schools and treasure-crammed museums.

Not all museum-school programs are new. In Boston, the Museum of Science claims to have started public school science programs in the nineteenth century, and the Children's Museum there has offered natural history and social studies programs since 1914. Every year for



over a decade the Houston Museum of Fine Arts School has provided space and materials for a hundred high school children who study under artist-teachers paid by the Houston Independent School District.

Children in Boston and Houston have been unusually fortunate in this respect, however. To many city children, going to the museum has meant having to pay bus fare in order to put in a dreary hour or so in vast, poorly lit, cold halls, peering at displays labeled DON'T TOUCH! For their part, many children in rural areas or small towns have had no opportunity for museum experiences of any kind.

Now, this is changing. Museum education directors, a new breed of professionals, are gearing exhibits to appeal to children and, through branch or mobile museums, are making the exhibits accessible to all of them.

What is more, they are finding ways to help teachers make their students' museum experiences meaningful. Some museums provide manuals for teachers who have groups scheduled for museum tours; others arrange teachers' seminars and workshops.

Some cooperative relationships between schools and museums are informal; others, highly structured. In Cleveland, the board of education assigns three public school art teachers to the Cleveland Museum of Art to act as liaison teachers. They conduct classes for the city's public school students at the Museum and also use materials from the Museum to teach art appreciation in the schools.

In New York City, the school board provides two full-time teachers to coordinate the Metropolitan Museum of Art's Junior Museum's exhibits, tours, and classes with the school curriculum.

The art department of the St. Louis public schools expects teachers to take their classes to the City Art Museum at least once a year, and supplies the Museum with three art historians to lecture to students.

The city government of Newark, New Jersey, provides an operating budget for the Newark Museum. In 1967, 42,025 young people were given guided tours in the galleries.

In Birmingham, Alabama, a U.S. Office of Education Title III grant supports a school-museum program. Instructors from the Birmingham Museum deliver slide talks to high school art, English, and history classes. For elementary schools, the program calls for visits by an artmobile as well as a Thursday tour for eighth graders and classes and workshops for teachers and pupils.

A staff of liaison teachers in Baton Rouge have prepared audiovisual materials relating to some impor-

tant exhibits at the Louisiana Arts and Science Center. Other functions these liaison teachers perform are visiting schools to work with classroom teachers to prepare students for museum tours; coordinating tours; and conducting follow-up activities. One liaison teacher works full-time on developing a sixth grade humanities program involving art, drama, music, history, literature, and architecture. Another concentrates on astronomy, encouraging use of the planetarium at the Center.

The North Carolina Museum of Art houses the Mary Duke Biddle Gallery for the Blind. Its permanent collection includes such touchable objects as a bronze Egyptian cat, a cast of Rodin's "Hand," and an Etruscan helmet. Since the gallery opened in 1966, blind students have enjoyed special exhibits on such diverse subjects as "Musical Instruments of the World," "Chinese Jade," and "Athletic Figures."

Nathaniel Dixon, director of the Office of Academic Affairs of the Smithsonian, a schoolman turned museum educator, believes "the whole concept of museum utilization is changing a great deal." Recently, he instigated a summer project wherein suburban and metropolitan education boards paid teachers to work out projects in museum teaching to enrich the curriculum of various grade levels. "We [in the museums] must be sensitive to emerging curriculum patterns; at the same time, curriculum makers should be sensitive to our resources," says Dixon.

The museum tour is no longer a passive experience. These days, "touch" sessions, free discussions, lively demonstrations, and workshops immediately follow lectures. For school groups viewing its paintings, the Metropolitan includes a creative art workshop in the schedule; the Smithsonian makes available special classrooms equipped with papier-mâché, microscopes, plants, live animals or small models, and standard audiovisual equipment for follow-up probing and unhurried discussion of new concepts after a museum visit.

According to Mr. Dixon of the Smithsonian, exhibits there are designed "to upset the attitude that behavior in a museum should be the same as in a public library." Purposeful noise and activity on the part of museum visitors are regarded as signs of successful stimulation. The exhibits themselves aren't static. Visitors hear the whistle of a locomotive, the sounds of machinery in the machine shop, and soon, they will be able to hear the trumpeting of an elephant. The machine shop smells of machine grease; the replica of an old-time confectionery shop gives off the aroma of chocolate.

Museums are using imaginative techniques to lure the children in. Boston's Museum of Science, for example, publishes a brochure entitled "Take Off to Wonder." "Adventure at every turn," it boasts. "See how you were born. . . . Hear a talking transparent woman whose organs light up as she explains her bodily functions. . . . Play tic-tac-toe with a computer. . . ."

This Boston institution provides a highly dramatic program on a selected topic each year, using special, staff-designed demonstration devices. Youthful visitors to the museum are encouraged to wander through the halls on individual tours of discovery and to watch brief demonstrations there.

At the Milwaukee Museum, students get to play games. A youngster entering an exhibit hall may rent, for a dime, a portable tape recorder and programed learning machine. A recorded voice guides him through the exhibit, telling him about the various displays and quizzing him about what he is learning. He must answer the question on one part of the exhibit correctly before he goes on to another. He responds by pushing buttons on the learning machine. The machine lights up like a pinball machine for correct answers; goes black for wrong ones.

"For children, this is terrific," says the director of the program, C. G. Screven of the University of Wisconsin-Milwaukee Psychology Department, adding that teen-agers will stand in line half an hour for a chance to play. Rewards for good performance may be refund of the dime or a small prize, although the ideal outcome is for the child to realize early that learning is its own reward. Testing has shown impressive increases in learning through game playing as opposed to unstructured encounters with the same exhibit.

Museum programs for inner-city children of all ages—Head Start through senior high—are proving to be especially valuable. In many cases, museum branches have been established right in inner-city neighborhoods. The Whitney Museum of American Art in New York, for example, runs an Art Resources Center in a warehouse in Manhattan's lower East Side. Students from nearby schools come here on a released-time basis to work on art projects. Observers report that participating in the program has improved the behavior of some boys who have been discipline problems. The youngsters themselves are enthusiastic. One boy said, "Here, I am treated like an artist—like somebody special. At school they treat us all the same."

In Washington, D.C., the Smithsonian operates a neighborhood museum in Anacostia, a low-income, high-density, largely black section across the river from the Capitol. This is no stamp-sized replica of the parent institution, but a facility especially designed for the community it serves. From the start, citizens from the area, including teachers and administrators, have advised and helped to run it. School groups tour exhibits, such as a recent one on African culture, and afterwards, during workshop sessions produce art objects or artifacts related to what they have seen.

Bedford-Stuyvesant district in Brooklyn, a section similar to Anacostia, has its neighborhood museum, too. When the Brooklyn Children's Museum closed its main building, fifth graders from the area carried part of the collection there to a new home in their own neighborhood—a building that was formerly a poolroom and automobile showroom. Muse, as the branch museum is called, houses widely varied displays, a small planetarium, classroom space, and a library. Teen-agers act as junior curators.

Swarms of youngsters come to Muse to look and touch and listen

and learn. Some come on their own, to participate in art, science, jazz, or writing workshops; attend the evening programs, Saturday and after-school events; or take part in preschool programs. Others come in school groups to attend lectures by staff experts and remain for the discussion and workshop sessions that follow.

Mobile museums are making various kinds of museum experiences available to children right at their own schools. The Virginia Museum sends four traveling galleries loaded with art treasures to visit even the remotest areas of the state. The Mini-Natural Science Museum of the Philadelphia Academy of Natural Sciences features a live animal show and a conservation movie.

The Art Resources Traveler is the name the Illinois State Board of Education has given to its traveling museum. This is a specially designed and equipped trailer unit, financed by federal funds. Its first exhibit, to which several museums lent works of art, was a survey of art from Egyptian through contemporary. Before the Art Resources Traveler visits a school, teachers there receive materials to use in preparing their classes for the show. During the actual visit of the Traveler, the program includes in-service lectures for teachers and programs for adults in the community as well as carefully planned experiences for children.

The Mobile Gallery of the Wichita, Kansas, Art Museum brings an exhibit of original works to communities in 13 unified school districts for a stay of from one to three weeks. An art educator-curator accompanies the exhibit and serves as guest lecturer, art consultant, and visiting instructor to schools and community during the stay, conducting preparatory meetings, workshops for elementary teachers, and postvisit activities for the children. One child found the experience particularly worthwhile. He said he planned to be a writer and appreciated the chance to look for an artist to illustrate his books.

Some museums are cooperating with schools by making available kits that let teachers turn their classrooms into mini-museums. The Boston Children's Museum, for example, offers school-tested, boxed materials developed under a USOE contract. Called MATCH (materials and activities for teachers and children) Boxes, they contain artifacts, models, audiovisual materials, and teachers' guides around which a teacher can plan various lessons. One kit contains a portable press, type fonts, paper, ink, and instructions for printing and binding a book. Another enables a class to "excavate" an ancient Greek villa.

The Newark (New Jersey) Museum distributes catalogs listing over ten thousand 3-dimensional objects available for use by schools.

The State Historical Society of Colorado sends out kits within the state. One of them on mining includes gold pans, ore samples, oil lamps, and jacks and drills.

A few schools have permanent museums of their own and have developed programs to go with them. One of these schools is Calvert Elementary School in Lincoln, Nebraska. Here, two mothers, both former art teachers, sparked donations for a $50,000 collection of painting and sculpture and organized extracurricular programs for the pupils.

New Visions Museum in Dayton, Ohio, a Dayton Public School Project operated under ESEA Title I, was developed and designed to challenge the imagination and thinking of children through the use of their five senses. The uniqueness of this museum is that children are aware that the atmosphere was created for them. They begin to know themselves by using all of their senses in exploring and discovering artifacts of many cultures. The Museum's program is not intended as an end in itself, but as a means of opening doors during the early years.

In the Pac-A-Pic program in St. Louis, individual schools own reproductions of famous paintings with information about the artist and the work of art on the back. A child can select a favorite, tote it home in an Army-surplus canvas bag, and keep it for two weeks.

By one means or another, more and more American children are having the opportunity to have the firsthand cultural and scientific experiences that well-planned museum programs can give them. The museum is coming into its own as an important educational agency. •

REX V. NAYLOR, *chief of speech pathology, U.S. Naval Hospital, National Naval Medical Center, Bethesda, Maryland.*

The Child Who Stutters

• **You're teaching a new class and** ask a boy to explain his assignment. He starts to answer, then contorts his face into a grotesque mask, stares miserably out the window, and struggles mightily to say a simple word like *five.* If Bob could talk freely, he might make remarks similar to those two other teen-agers made to a speech pathologist about their stuttering:

"The stuttering is easier to control than the fear."

"I'm the judge, jury, executioner —and the crime."

Fear, guilt, self-punishment—can you as a teacher do something to rescue youngsters like Bob from harboring such self-defeating feelings? If you understand what stuttering is all about, the answer is yes.

We sometimes notice that these children who make such a struggle of talking make unreasonable demands of themselves, especially with regard to their speech. It may even reach the point where Bob tells himself, in effect, "If I can't say it right, I won't say it at all."

As we talk, most of us blunder along calmly, repeating, hesitating, backing and filling, and then going ahead with what we have to say—usually not even aware of these normal disfluencies which occur in the daily speech of all of us. Not so with the person who stutters. When he hears disfluencies in his speech, or even anticipates them, the alarm bells ring, he tenses himself to fight, and in doing so multiplies his difficulties. In Wendell Johnson's whimsical phrase, he hesitates to hesitate.

In large measure, Bob's twisted face, the way he gasps or holds his breath, or repeats the first sound of a word five or ten times, are his battle to control his breaks in fluency and to hide them from his listeners. The irony is that this very struggle to hide his disfluencies literally becomes the stuttering. Where disfluency exceeds what we accept as normal (and a speech pathologist ought to help make that decision), it is much healthier to keep the problem out in the open where it can stay in perspective.

As long as Bob hates himself in the act of talking, he will probably approach human contacts with mixed feelings of hunger for acceptance and fear of rejection. The more you and others seek him out and listen calmly and matter-of-factly while he stutters, the more reassurance he should feel that he can be liked just as he is.

Once the urge to conceal gets under way, the child has unwittingly committed himself to a process of learning how not to learn. He contrives to dodge the very experiences he needs to mold his behavior gradually into something more acceptable. Especially in the area of speech, and perhaps in other activities, too, the person who stutters often develops an exaggerated intolerance for making mistakes—the mistakes that are a natural, necessary part of the learning process.

The person who stutters needs practice in making mistakes, rather than practice in talking smoothly, since he knows quite well how to talk smoothly and does so a high percentage of the time. He needs to convince himself, by experience, that he can and should continue to move forward in spite of the errors in his speech, that he needs to leave behind once and for all the conflict so clearly evident in his going-ahead-holding-back way of talking.

With help, Bob can give up the misleading goal of trying not to stutter, and concentrate instead on the real job—that of gradually hammering his stuttering into something more nearly resembling normal dis-

fluency. He can do this only while stuttering. As he learns to risk putting himself before the world just as he is, without apology, he begins to accomplish something even more important than the ability to reshape his contorted way of speaking. He begins to create the social world he wished he could discover.

Thus the treatment of stuttering is a bootstrap operation by which the individual gradually discovers that he is largely responsible for the way others regard him. But as Johnson once said, "It takes two to stutter." The second person in the equation, the listener, can do much to undo stuttering by changing the way he responds to the person who does it. You, as Bob's teacher, are one of the most important listeners he will encounter. How you react can affect him deeply.

We're talking mainly about the child or adolescent who knows he stutters, the one you will most often encounter in the classroom. For the child who's just beginning to stutter but does it with no signs of struggle or who shows little or no apparent concern, we try to use indirect methods. We tend to work primarily through the child's parents (since this child will usually be a preschooler), trying to help them resolve tensions or conflicts that seem to precipitate stuttering, but doing nothing to call the child's attention to his way of talking.

When a child like this shows up in the classroom, you will want to convey your support indirectly. Your own calm, unhurried manner is important, not only for its impact on the child, but for how it influences the reactions of other children in the classroom. As you display warm, outgoing attitudes and an easy verbal give-and-take with those around you, you may contribute immeasurably to the speech of the child who stutters if you can draw him into the conversational circle. If he finds in you only friendly acceptance whether he talks freely or stumbles over his words, he may be able to lose his dawning apprehension about speaking.

Whether the problem is in this primary stage or has developed into the secondary stuttering you observe in Bob, you can see why it is important for you, the child's parents, and the speech clinician to work together—first, to define the problem clearly, then to work out a coordinated plan to help.

In the early years, prompt action can prevent a child from clinging to the bad feelings that often go with stuttering. When a child's concern about speaking is firmly planted and he is already beginning to hold a distorted view of himself and his world—as in the case of Bob—then you can help directly and without evasion.

There is no point in ignoring Bob's evident anxiety about taking part in classroom routines. Help him express his apprehension and decide how to handle it. The conspiracy of silence that often surrounds stuttering is one of the conditions that keep it going.

You and the speech clinician ought to plan your strategy together before involving Bob. You might begin to talk to Bob alone about his stuttering. Then you can bring one or two of his classmates into the discussion. You can find out whether Bob would prefer to be called on in alphabetical order in the classroom; he'll probably ask to be called on at random, early in the hour, to avoid some of the mounting tension of waiting. Perhaps he will prefer that you keep direct questions to a minimum and invite remarks from anyone in the class instead. That way he can set his own pace. One of the goals of these encounters is simply to give Bob a chance to talk, to help break through any self-imposed isolation.

As soon as the time seems ripe (and again with the agreement of both the speech clinician and Bob), you can introduce the subject of stuttering in the classroom. First you may want to make a casual comment or two yourself after Bob has recited. Then you may decide to invite questions from the class; and finally, with a forewarning each time to Bob, you may ask him on different occasions to tell a little about how he is working on his speech, to demonstrate the different ways he stutters, to explain how other people sometimes react in ways that aren't helpful, and to tell some things the listeners can do to help.

Without singling Bob out too much, you will find numerous ways to draw him casually into more verbal give-and-take in the classroom: taking sides in a debate; counting and announcing the vote in a class election; serving on the party committee; practicing introductions; reporting back as part of a group of two or three on some aspect of a field trip. Probably the best activities at first are those that do not focus too much attention on him and what he says but that make him part of a lively and interested group. A good approach is to look first for the kind of speaking he does with least difficulty and then build from there.

Since stuttering is very much a problem of fear, lead—don't push—the child who stutters. Forcing him to recite is unnecessary cruelty, but pointedly skipping him day after day is not going to help his morale much, either. While you are helping him discover that talking can be a happy adventure, don't neglect the opportunity to help him develop other social skills—abilities that will bring him closer to other people without making unusual demands on his speech and that will offer still other means for breaking out of the solitary confinement he sometimes creates for himself.

Variations in stuttering are rather common. A sudden increase in frequency or severity probably does not signal a permanent change for the worse. More than likely, it indicates that the youngster is temporarily upset by something. Where necessary, you may find ways to ease the tension, but don't offer sympathy to the child who seems ready for a little more toughening. Instead, cheer him on with a comment such as, "That's great. You're really wrestling with it now. Keep going."

Be ready when the clinician asks Bob to stutter on purpose. He may even ask him to exaggerate and prolong his stuttering in order to give himself more time to change the unnecessary things he does, such as blinking his eyes, holding his breath, or jamming his tongue against the roof of his mouth.

The goal, remember, is not to stop stuttering; it's not even to stutter

less frequently. Your advice to Bob might be quite literally, "Stutter more. Stutter until you are calm. Stutter until you are relaxed. Stutter until you can shape the stuttering into normal disfluency, until the impulse to stutter is gone."

Out of this approach, Bob should gradually gain increasing self-respect, single-mindedness, and the peace of mind that comes with giving up the pretense of fluency and saying instead, "Yes, I stutter and I'm doing something about it." Out of it, too, comes an increasing desensitization of the alarm system that triggers anxiety, embarrassment, and more stuttering.

In view of Bob's struggles he, and we, must feel at times that he is in the grip of some mysterious force and that he can no more control his stuttering than he can slow the rate of his heartbeat. But experience in the speech clinic soon proves that this is not the case. The person who stutters can modify his stuttering, intensify it, prolong it, shorten it, pound it into a new shape as if it were a piece of clay. And though it may not be easy, he can—indeed, must—also change the emotional turmoil that often goes with stuttering, for otherwise the job will be only half finished.

Don't try to evoke deep-seated feelings that don't exist, but Bob may need an outlet for pent-up frustrations. At times he may envy the smoothly flowing speech of others and think bitterly, "Why do I have to be this way?" He can be guided to hate his habit of running away and to resent his fears without hating himself as a person or giving in to a feeling of helplessness. He can discard the cringing attitude that may have tempted him to approach people as if to say, "Please like me."

"Mild" stuttering may indicate denial, refusal to deal directly with the problem. The person for whom stuttering is most traumatic is often the one who works hardest to keep it under cover. His battles are fought in secret, and he is most upset when the effort to conceal breaks down and the stuttering shows through in spite of his desperate struggle to hide it. Thus, it does no good to participate in his sometimes ridiculous and pathetic masquerade that he does not stutter, or at least that if he only tries hard enough, he won't.

You can help Bob make the distinction between a Stutterer and a person who sometimes stutters. The latter may also drive a car, excel at mathematics, and play a great game of tennis. A Stutterer never does any of these other things; all he does is stutter.

What are some of the things you might be tempted to do which would only make it harder for the person who stutters?

- Don't wait for him to finish a word. Run to the rescue and say it for him; that way he'll know what a sympathetic person you are. (But he'll never know whether he could have said it without your help.)
- Tell him to slow down and take it easy. (He's heard that one only 3,714 times before, so this time it might work.)
- Tell him to take a deep breath before he talks. (Do *you*?)
- Tell him to think about what he wants to say before he says it (Yes, shouldn't everybody? But chances are more than good that he knows precisely what he wants to say.)
- Tell him to snap his fingers or pause or tap with his foot or say "Uh" before "difficult" words or count to five or talk in time with a metronome. (All of these should be very helpful in raising his anxiety level by letting him know in a subtle way that you can't stand to listen to stuttering.)
- Praise him to the skies whenever he talks without stuttering. (Now he knows for sure you'll never praise him for trying to wrestle openly with his stuttering until he can master it; now he knows how you feel when he *does* stutter, and he'll work harder than ever to keep it under cover.)

How can you decide when to protect Bob from competition with his classmates and when to encourage him to dive into the fray? The teacher who overprotects feeds the child's tendency to pull into his shell. True, the child who stutters severely needs a little sheltering, but he also needs the bracing support of continual challenge.

That challenge, carefully geared to what he is ready to handle, says in effect that others feel no special urgency to shelter him (we all need *some* sheltering), that they have confidence in his ability to fight his own battles, that they are willing to risk seeing him "fail," since that "failure" will surely be a partial success if only because he was bold enough to make the attempt. The slow shaping of character and courage is more fundamental than are the daily ups and downs.

As you set out to help Bob develop a new set of attitudes, you might take inventory of your own feelings. Can you listen to him without betraying impatience or uneasiness? Can you calmly look him in the eye as he struggles? Do you feel a surge of pity that shows in your face and that moves you to shield him from normal competition? Do you yield to the temptation to supply the needed word? Are you afraid of doing something that will make the stuttering worse? Are you afraid the other children might "pick it up"?

Consider whether you can afford to admit to some of the irritation that stuttering creates for the listener, while at the same time you learn a little better how frustrating it can be for Bob. Perhaps you can say to him, "Stuttering *does* get in the way, doesn't it? I'll have to admit it gets under my skin sometimes. But I really admire you for keeping the problem out in the open like this where you can work on it. Keep up the good work."

You're saying to Bob, in effect, "Better that we should suffer this minor irritation together than that you should continue developing self-destructive attitudes. Better that we should climb this molehill before it becomes a phony mountain."

Stuttering is shaped by those who do it and by those who listen to it. How do *you* respond to the person who stutters? •

♦ *For a listing of clinicians in your area who hold the Certificate of Clinical Competence in Speech Pathology, write to the American Speech and Hearing Association, 9030 Old Georgetown Road, Bethesda, Maryland 20014; or consult your local or state speech and hearing association.*

QUADRIPLEGIC TEACHER

MARGARET JEAN JONES

• **One day in 1959, the superintendent** of schools in Alsea, Oregon, was showing a distinguished visitor through the local elementary school. "I wish all our teachers could do as well on their feet as this one does from his wheelchair," he remarked, escorting his guest into a classroom where a balding young man in his mid-thirties was writing a lesson on the chalkboard.

Harold L. (Casey) Jones (no relation to the author) overheard the remark and smiled to himself at this acknowledgment of the success he had achieved since beginning his teaching career two years earlier.

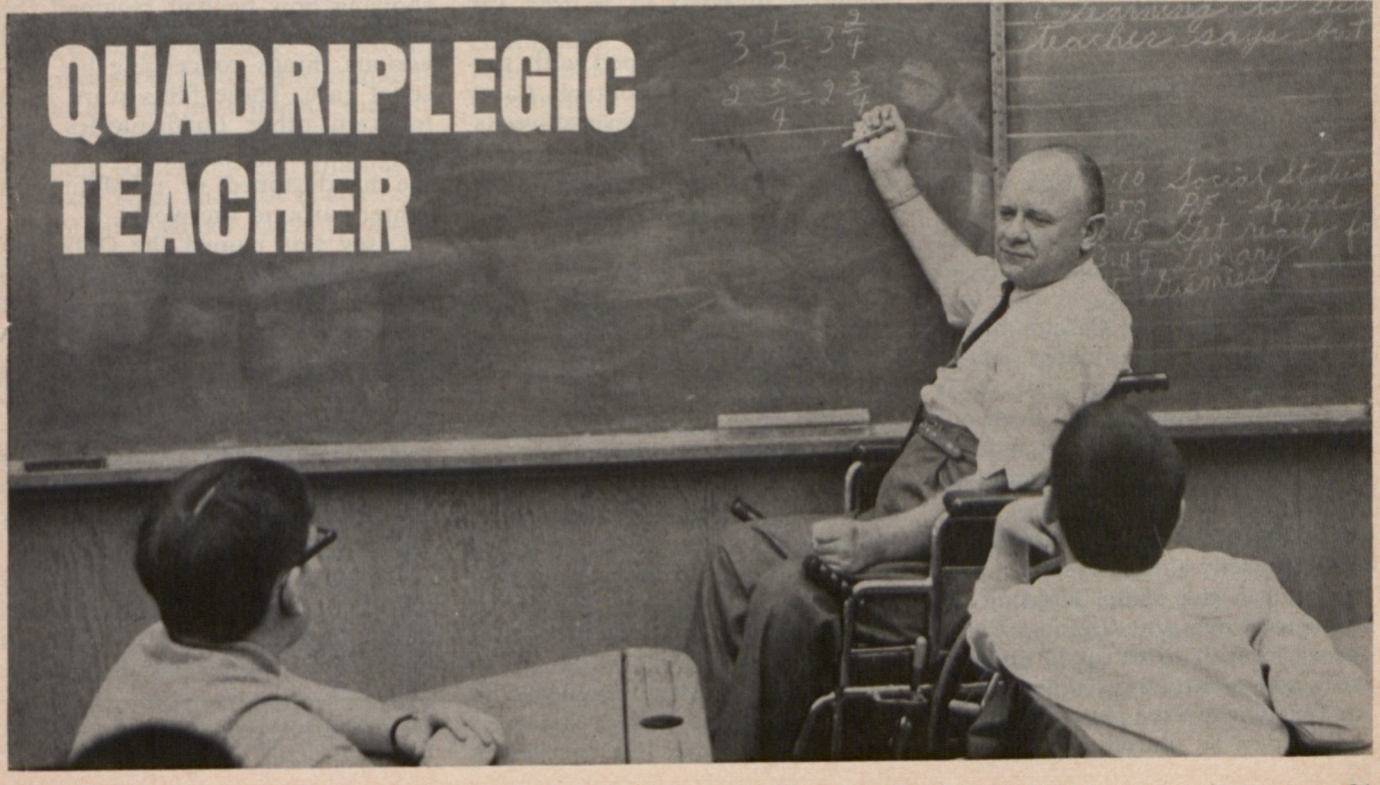
When compared to his situation 16 years before, following a diving accident in which he had suffered a paralyzing spinal injury, Casey's present independence looked easy. Only he himself knew what a tremendous price he had paid for the compliment he had just received. Not only had he financed his success with sheer determination and willpower, but he had also been his own teacher, using the trial-and-error method.

In August 1943, when Casey had finished a year of vocational agriculture at the University of Wisconsin, he became totally paralyzed from the neck down as the result of a broken neck sustained when he dived off a raft and hit a submerged bank. After eight weeks in the hospital, he was sent home with the discouraging prognosis that he would never be able even to propel his own wheelchair.

At the time, he could only lie flat in bed, unable to move a single muscle on his own. Family and friends did their best to make Casey comfortable but his helplessness rankled, and he rebelled.

Professional physical therapy was unavailable because this was still the prehistoric age of rehabilitation as far as quadriplegics were concerned. Casey was, therefore, forced to map out his own course. "Since I was already at the bottom, I couldn't go any way but up," Casey has said of his decision to undertake his own rehabilitation.

With concentrated effort and hard practice, he managed to bring his right arm to his mouth, but he couldn't straighten it again. Neither could he hold anything in his hands, because he could not extend or flex his fingers. Finally, however, he dis-



covered that his wrist did have some flexion and extension and that when he extended his wrist it put tension on the tendons in his fingers causing his fingers to curl slightly.

Taking advantage of this slight muscle power, Casey asked a friend to fashion a wide, flat splint to fit inside his curled fingers to hold a spoon or fork. He had the splint tied onto his wrist. Next, he acquired a hospital bed and, after much cranking up and down by a friend, discovered the exact body angle that would permit his arm to fall back of its own accord. Using all these arrangements, he managed to feed himself.

Casey was elated over his first triumph. Never mind that it took him over an hour for each meal because his arms were so weak he had to rest after every bite. Never mind that he spilled food. At long last he was actually feeding himself.

One day Casey looked at his typewriter sitting in a corner of his bedroom and had an inspiration. He requested that a pencil be tied to his wrist, eraser end down, and the typewriter placed in a comfortable position. Awkwardly, Casey hit a key at random and was rewarded with its imprint on the paper. Overjoyed, he determined to master this method of typing. Despite having to rest after every word he eventually learned to type over 30 words a minute.

Casey followed a regular schedule of exercising those muscles that would function and trying to encourage those that were still useless. He learned to shift the position of his body and, eventually, to turn over by himself.

From somewhere, Casey's brothers acquired a dilapidated wheelchair and lifted Casey into it. It was the first time he had been out of bed in more than eight months and he marked the occasion by fainting.

For the next three months Casey fainted briefly almost every time he was put in the chair. Fighting extreme weakness and dizziness, Casey forced himself to sit up 30 minutes daily and eventually was able to sit up for two hours.

One day he stared down at his hands resting on the arms of the chair. "Get me some hooks and strap them on my wrists," Casey told his brother. Grasping the spokes of the wheels with the hooks, he pulled upward with all his strength. The chair crept forward. By repeating this process, he slowly made his way across the room.

The hooks were slow and clumsy, so he worked out a lever and ratchet system with a mechanic. Several years later he transferred to a regular chair with hand rims to which rubber prongs were attached to enable him to use the palms of his hands.

For 20 years following his accident, Casey was frequently hospitalized for problems not directly connected with his accident. On one of his visits to the hospital, Casey met and fell in love with Louise Scherer, a pretty 18-year-old nurse's aide who was studying to be a teacher. Casey and Louise were married in 1949.

Casey, who by now was able to be up 10 or 12 hours a day, took his bride home to the dairy farm in Gillett which he was operating with the help of hired hands. He also ran a bookkeeping service at home while Louise completed her education.

In 1953, Louise and Casey won $500 on a TV quiz show which they promptly invested in a used car with an automatic transmission. After having it equipped with specially designed hand controls, Casey practiced driving for several weeks, scored 100 percent on both the written and the road tests, and was issued an unrestricted license.

In 1954, the Joneses moved to Alsea, a suburb of Eugene, Oregon. Mrs. Jones began teaching in a local school, and Casey enrolled in the School of Education at the University of Oregon in Eugene.

Before signing up for classes, Casey studied the campus layout carefully, looking for back entrances at ground level, elevators, and freight ramps. Of necessity, his schedule was often one of physical convenience. He took a few required courses by correspondence between terms.

Once the physical problems on the campus were solved, Casey excelled academically. He carried an 18- or 20-hour load rather than the usual 15 and earned his B.S. degree in three years.

He assumed his first teaching position in Alsea in 1958. Two years later, he decided to work on his M.A. degree and transferred to the Bethel School District, which was near enough to his old alma mater to permit summer enrollment. Illness and surgery prevented his attending classes two summers, but in 1964 he was awarded his master's degree. He and Louise still teach in the Bethel District near Eugene.

Casey holds an enviable record of low absenteeism from his job. The only concessions made by the school for Casey were to raise his desk a few inches so that his wheelchair would fit comfortably and to provide a small file cabinet which he requested. One of his broad flat splints was fitted with a chalk-holding device. Casey taught each new class of willing young students to operate the tape recorder and movie projector and to set up other visual aid and bulletin board projects.

Because Casey was a pioneer in the rehabilitation of quadriplegics, he was asked to make educational films in 1946 and 1949 at the Wisconsin General Hospital in Madison showing how he had regained the use of his muscles and how he did various things concerning his personal care. These films were used to train other quadriplegics and physical therapists who work with the handicapped in rehabilitation centers around the world.

Casey was named the Outstanding Handicapped Individual of the Year for the state of Oregon in 1964 by both the Governor's Committee and the President's Committee on Employment of the Handicapped. Like his idol, Franklin D. Roosevelt, he consciously avoids as far as possible anything, such as stairs and unnecessary aid, that creates a bad (i.e., helpless) image.

"Because of this, people tend to forget that I am handicapped," Casey smiles. And that, to him, is the greatest tribute of all. •

In addition to his work as a teacher, Mr. Jones is also an active member of the Bethel Education Association's public relations committee.

ON CHILDREN AND LEARNING

JEROME KAGAN, *professor of human development, Department of Social Relations, Harvard University.*

• **Numerous critics of public education** seem remarkably agreed that the school is to blame because the child does not develop an affection for learning. This seems to me to be a gross oversimplification.

The belief that the child loves to learn new skills is central to the accusation that schools destroy the child's zest for learning. "Watch any seven-year-old on the playground, in the attic, with his friends," the critics say. "He always seems to be learning something and smiling as he does. Since such joy is absent in school, the school must be doing something wrong."

This deduction glosses over an important difference between playground and school. On the playground the child decides what he wants to learn; in school he does not. Indeed, if children had naturally selected multiplication as a skill they wanted to acquire, we might never have invented schools.

The child does not find all tasks equally inviting, and the idea that he does is one fallacy in the current critique. Despite varying pedagogical conditions, the typical child's attitude toward academic tasks is negative. There are good reasons for this, and they form the essence of my observations here.

Achieving autonomy is a primary goal of the child. He strongly needs to believe that he is capable of deciding his actions and his values. One sees this need in pure form when the four-year-old fumbling with his shoelaces pushes his mother's intruding fingers aside. He wants to do the job himself. If one grants the power of this motive, it follows that the child will initially resist any adult-defined goal, regardless of its content or mode of presentation.

It is natural for the child to resist the arbitrary demands of a strange adult, especially when certain adhesive forces (identification and the motive to maintain an affectionate tie to an adult) are not strong in the school context. Children place a premium value on a skill if possessing it either makes them more like an admired person or brings them affection, praise, or promise of tangible rewards from the admired model. And this dynamic is usually reserved for the parent-child relationship.

Given only 40 weeks of interaction and the dilution of his attention among 30 eager recipients, the average teacher cannot hope to be as effective a model as the parent. However, the child would assign value to the activities teachers encouraged if the teachers could become more effective models. Recruitment of such teachers is urgent.

If the teacher cannot exploit the child's motives, the child is not likely to show great enthusiasm for goals imposed before he has had a chance to consider their attractiveness. The child's lack of interest is less the fault of the teacher's tactics or a curriculum's pace than it is the result of the child's need to define his own areas of mastery, so that learning is his victory and not someone else's.

If society had no special preferences as to domain of competence, children would be more enthusiastic each morning. They would select tasks determined by the values of the peer group, the immediacy of feedback, the likelihood of success, and the degree to which sensory and motor delights were part of the learning enterprise. Spelling, arithmetic, history, and science would not rank high on their preference scale. We are the ones who decided to give those skills priority, and our decision was partly rational. If we believe in that decision, we must tolerate the dissonance generated by the possibility that the child may not agree.

Some elaborate and farfetched strategies might soften the child's opposition. We might, for example, devote the first two years of school to persuading the child why he should be there. The average seven-year-old views attending school as he does brushing his teeth. It is an arbitrary social requirement imposed by adults; one of a set of rituals that, taken together, define goodness. "To learn is good, to be dumb is bad"—most children, deprived or not, will tell you that.

We must be less Pollyannaish about academic mastery in the child. Reading, writing, and arithmetic are not, like speaking, running, and climbing, natural activities that the child decides to perfect. It is sensible to think of persuading him of their potential pleasure before attempting to teach them. If we were successful, the teacher in the later grades might be able to withdraw more completely and allow the child to pursue the goals he has decided are important.

One final point. By misinterpreting a common observation, critics implicate the school: Children are happy on the first school day but are bored by November first. Yet we have known for several thousand years that man takes joy from novelty and change in experience. Unfortunately, both child and adult rapidly adapt to the new, and ennui replaces zeal.

I do not wish to minimize the deficiencies in current educational practices, but rather to plead for an appreciation of the psychological complexity of the problem. The school is in need of improvement; the child is not completely a blossom; learning to divide is not necessarily a joy. With these less polarized premises let us continue this important debate. •

THE SEARCHING MIND

FRONTIERS

DONALD G. COOLEY, *medical writer, Scarsdale, New York.*

• **Memory is the basis of learning.** What wouldn't the educator give for a memory-triggering pill that could stir his dullest students to feats of flawless recitation! Or that he might himself take to dispel the image of the absentminded professor.

Such a pill is not an impossible dream, for chemical agents to improve mental functioning are dimly foreshadowed in work already going on in scores of research centers. Yet if a "memory pill" is ever achieved, it will owe its creation in no small measure to a variety of research that is not primarily concerned with memory.

New medical research trails fan out into thousands of paths that crisscross and interweave bewilderingly. Their common denominator is the vast microscopic world of the human cell, within which myriads of fleeting chemical reactions are at long last beginning to become scrutable. Great advances in chemistry and physics have brought mysterious life processes under study at the molecular level and even at that of the exchanges of electrons.

Rapid progress in molecular biology laid the footings for a new platform of knowledge from which medical researchers are poised to take off in ways that are much more sophisticated and rational than the empirical methods of the past. Well-taught high school biology students are knowledgeable about the DNA molecules in cell nuclei, which carry all the hereditary directives of an organism and express them through the synthesis of catalytic protein molecules—enzymes—with the assistance of a sister nucleic acid, RNA.

Soon, perhaps unexpectedly soon, we should have detailed structural maps of human genes, which are thought to be groupings of fairly simple chemical units strung along the DNA molecule. How odd to think that a particular constellation of atoms gives us brown eyes, say, or toes instead of hoofs! Besides genetic mapping, there is the gigantic task of visualizing all of our life processes in molecular terms and reducing them—as has been done in many instances—to chemical equations and physical interactions.

What we have achieved in recent years represents a quantum jump in knowledge—and ignorance. How, for instance, do we learn and remember? Scanty present knowledge brings old theories into question without furnishing a completely satisfying new one. The long-credited theory that experience leaves an imprint on electrical circuits in the nervous system and that reverberations of the circuit evoke recall of the experience no longer predominates.

Startling and controversial experiments with goldfish, flatworms, mice, and monkeys suggest that memory and learning can be transferred physically from one organism to another. Uneducated worms and fishes have seemingly acquired fears and memories and habit patterns by receiving injections of brain substance of educated colleagues. Such studies, inconclusive and warmly debated though they are, hint that the learning process has a persistent chemical component.

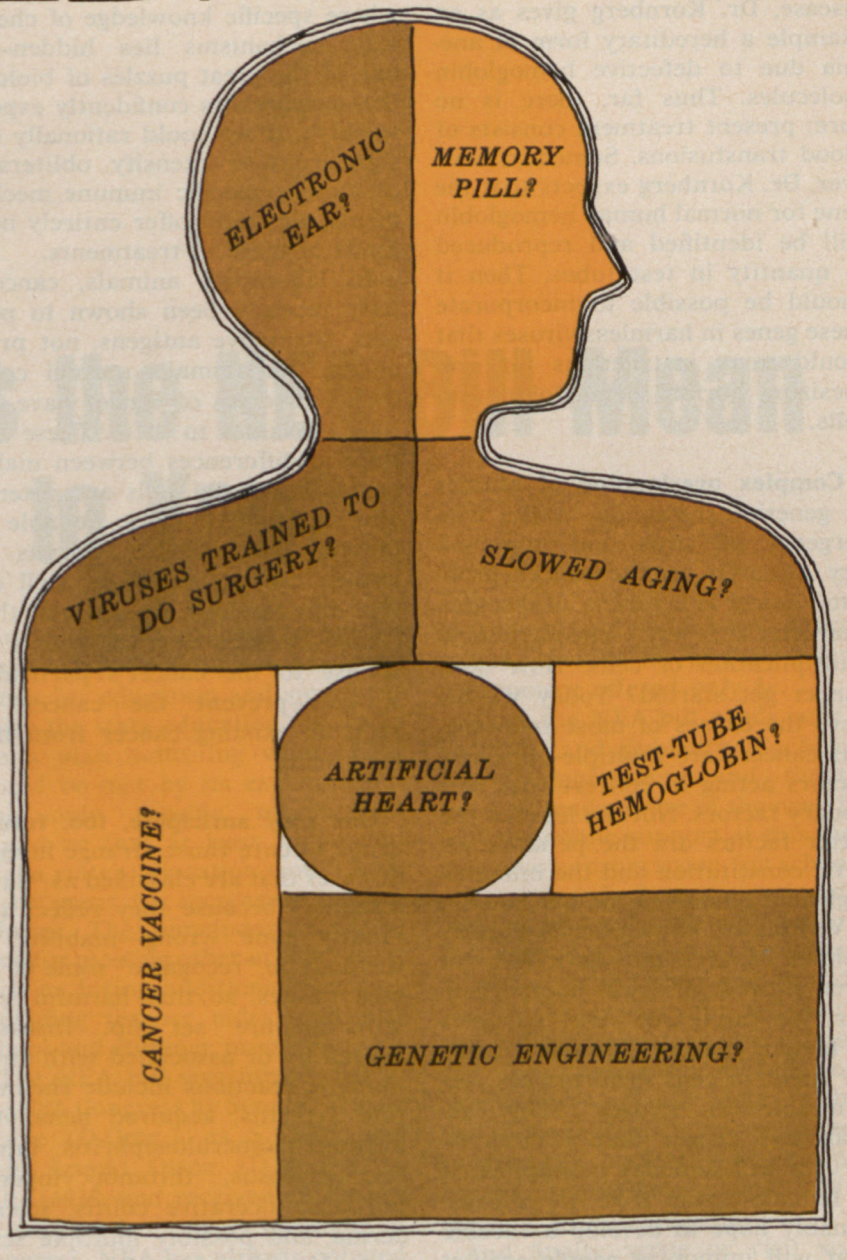
If so, how can mere molecules help us to remember? A current hypothesis is that experience induces a permanent biochemical change in the brain. To oversimplify, an event that has significance for us causes us to synthesize unique proteins in nervous tissue. These molecules persist and when they are somehow reawakened, we remember the original event. Changes in electrical, geometrical, and physical relationships are involved, but there is fair agreement that altered protein synthesis is an essential element of long-term memory.

Since protein synthesis is a chemical phenomenon, an inference is that we may be able to correct unsatisfactory mental functioning—psychosis, forms of mental retardation, irrational behavior, encroachments of senility—by providing the right chemical environment. Many mental disorders appear to arise from poor "molecular environment" of the brain.

Do patients with severe mental illness actually suffer from a disturbance of body chemistry? Controversy has for years surrounded reports of the isolation of abnormal substances from the blood and urine of schizophrenic patients. Cause-and-effect relationships between such excreted substances and mental disturbance are neither clearly defined nor clearly ruled out. But there are enough untraced chemical clues to give researchers hope that electro-shock treatments and the couch may eventually be dethroned by a capsule.

What medical advances may re-sult from making thousands of molecular maps of life processes? For one thing, the unknown causes of many diseases are doubtless hidden in the molecular transactions of cells. Suppose, for example, that the unknown cause of multiple sclerosis or diabetes could be traced to a biochemical defect in some regulatory or feedback system of the body. We would then have a basis for designing a drug to attack the disease directly, rather

OF MEDICINE



than merely its symptoms. The disease would become a thing of the past.

A few biochemical defects have in fact been identified, particularly in disorders characterized as "inborn errors of metabolism." Many of these chemical errors produce forms of mental retardation as well as physical symptoms. The defect is inherited. The victim lacks an enzyme necessary for some body process because he failed to inherit a gene that directs its synthesis. Phenylketonuria is a familiar example. The affected infant does not produce an enzyme necessary for metabolism of phenylalanine, an amino-acid constituent of protein foods. Toxic by-products accumulate and impair mental development. At present we treat the disorder largely by restricting phenylalanine in the diet, but how much better if the defective gene could be repaired to turn on a normal enzyme factory!

Heredity is also a factor in gout, diabetes, and many other disorders —both rare and common. Predisposition to high blood pressure, cardiovascular disease, rheumatic fever, and other conditions often "runs in families." As the science of medical genetics progresses, more and more diseases will probably be found to have, at least in part, some genetic basis. Gene-mapping gives hope that we may be able to identify a malfunctioning gene long before disease is manifested. But how can we repair the molecules of a gene? It is secure within body cells; snug, defiant, inviolable. Even so, it may not remain forever thus.

Geneticists begin to speak with some assurance of "molecular surgery"—a far-off frontier indeed. Perhaps 20 years off. One possibility is that of training viruses to perform surgery inside cells. In fact, they do so already, but with results that are usually harmful to the host.

Viruses contain a core of nucleic acids, bundles of genes, within a protein coat. A disease-causing virus attaches itself to a cell and, like an infinitesimal hypodermic needle, squirts its genes through the cell wall. This disrupts the cell's own genes.

Some viruses are harmless, however. Why don't we load them with *good* information—instructions, say to repair or replace a defective gene—and send them into cells to wield atomic scalpels constructively? We can't do this today because we don't know enough. But someday we will, in the view of Arthur Kornberg, Nobel Prizewinning biochemist of Stanford University School of Medicine. Hardly a wide-eyed dreamer, Dr. Kornberg is highly knowledgeable about viruses. He

and his colleagues have created a totally artificial "test tube" copy of the genetic material of a virus and demonstrated it to be as infectious as the original.

In discussing how "genetic engineering" can be applied to cure disease, Dr. Kornberg gives as an example a hereditary form of anemia due to defective hemoglobin molecules. Thus far, there is no cure; present treatment consists of blood transfusions. Someday, however, Dr. Kornberg expects that the gene for normal human hemoglobin will be identified and reproduced in quantity in test tubes. Then it should be possible to incorporate these genes in harmless viruses that would carry instructions for synthesizing normal hemoglobin into cells.

Complex overlapping of studies in genetics shows up in the convergence of virus and immunology research on the cancer problem. Cancer is a variety of diseases characterized by uncontrollable multiplication of cells. How does cancer get started? Today we believe the causes of most spontaneous cancers are multiple—primary factors acting in concert with secondary factors. Not the least of the latter factors are the person's genetic constitution and the immunological mechanisms of his body.

Viruses are known to cause many animal cancers but have not yet been proved guilty in human cancer. We rarely see virus particles in human cancers. Possibly viruses lie latent in cells in forms not recognizable as viruses. Many researchers expect that a virus or viruses will someday be implicated in human cancer. If so, we can reasonably hope to develop a vaccine that will immunize people against cancer.

We quite probably have natural immunities that protect us against cancer by rejecting occasional malignant cells or interposing a barrier to factors that might ignite them. If this protective machinery exists, we know very little about it or why it sometimes fails. Newly recognized ignorance has immensely complicated the entire discipline of immunology, which is too easily thought of as a simple matter of antigenic substances stimulating the production of antibody molecules that thereafter recognize and neutralize the antigen.

The body's incredible selectivity in rejecting millions of potential antigens—at the molecular level, where specific knowledge of chemical mechanisms lies hidden—is one of the great puzzles of biology that researchers confidently expect to solve. If we could rationally design drugs to intensify, obliterate, or modify specific immune mechanisms, we could offer entirely new kinds of medical treatments.

In laboratory animals, cancers have recently been shown to possess distinctive antigens, not present in the animal's normal cells. Different forms of cancer have antigens peculiar to them. These distinctive differences between malignant and normal cells are potentially exploitable. Were we able to identify comparable antigens in human cancer, we might well devise immunology treatments that could—by enhancing the body's response to the cancer's particular antigen—prevent the cancer or keep an existing cancer from metastasizing.

One may anticipate, too, future drugs to cure those strange human diseases that are classified as "autoimmune" because they reflect immunity gone wrong—inability of the body to "recognize" some of its own tissues, so that harmful sensitivities are set up. Diseases caused by or associated with autoimmune reactions include rheumatoid arthritis, acquired hemolytic anemia, glomerulonephritis, lupus erythematosus, thrombocytopenic purpura, ulcerative colitis, scleroderma, and possibly multiple sclerosis. Allergies also reflect perverse behavior of immune mechanisms. Researchers hope to pinpoint the structure-activity relationships of molecules and immune mechanisms, and from a new base of knowledge devise chemical means of curing a broad spectrum of disabling and sometimes deadly diseases.

Heart transplant operations have made the biggest medical headlines of the year. Kidney transplants have been done for years with less fanfare. We have experimentally transplanted the liver, lung, spleen, and other organs. But the body's tendency to reject donated organs is a great limiting factor. We use drugs, radiation, and antilymphocyte serum to suppress the patient's immune mechanisms while he adapts to the organ. Unfortunately, such measures dangerously reduce resistance to infection and interfere with synthesis of important proteins. What we need—and what may be forthcoming from immunologists—are chemical agents to turn immune reactions off selectively and harmlessly.

In the longer view, however, many researchers expect that transplants of completely artificial organs will supersede those of human organs. This is certainly the view of the American Society for Artificial Internal Organs. The supply of donated organs is not equal to the demand and probably never will be, even if techniques of organ preservation are perfected.

The first completely artificial organ will undoubtedly be the heart, a relatively simple pump, as organs go. Already in use are partially artificial hearts, with artificial valves or booster devices such as an artificial ventricle. The next step is a totally artificial heart that will replace the patient's doomed organ and run for the rest of his life. Several experimental models, somewhat resembling plastic bags with a tangle of tubing, are in a fairly advanced state of development. One model has kept animals alive and healthy for two or three days. We do not know how long it will take to perfect an artificial heart and to cure patients with coronary thrombosis by implanting a device taken off a shelf, but 10 years is a reasonable guess.

More far-out in the era of artificial man are artificial devices embodying miniature electronic components and highly sophisticated technology. An artificial ear that electronically simulates the auditory functions of nerves and structures is under development. Implantable pacemakers that deliver timed electrical impulses to regulate the heartbeat are forerunners of devices that can be preprogramed

(Continued on page 86)

What Does the NEA Bill Mean to You?

FRANCES M. CARNOCHAN, *chairman, NEA Legislative Commission; guidance counselor, Trenton Central High School, Trenton, New Jersey.*

• **We as educators have a tremendous** stake in what happens as the 91st Congress convenes next month. It's a new ball game in federal education programs, and what we as individuals and as members of NEA are willing to contribute to the play will have a measurable impact on the shape of legislation to come.

Early in 1968, the NEA Legislative Commission drafted a $6 billion general federal aid bill to augment current specific-purpose legislation. The reasoning behind this proposal by NEA was that the federal government must assume a vastly larger share of school finance in the years ahead. NEA believes that the federal investment should increase from the current 8 percent level to 25 percent in the near future, with an absolute minimum of interference from Washington.

If passed, the bill would: multiply the sum of $100 by the number of school-age (5-17 years) children in the nation; distribute this money to the states on the basis of relative population; and add $750 million to give added help to low income states. It would earmark the funds for education and simply require the state education agency to file a plan indicating what needs would be met by its expenditures. The only specific requirement would be that at least 50 percent of the state's allocation would have to be spent for increasing teacher salaries. The remainder could be used for meeting other urgent needs, such as hiring additional teachers, providing teacher aides, and preschool and summer programs.

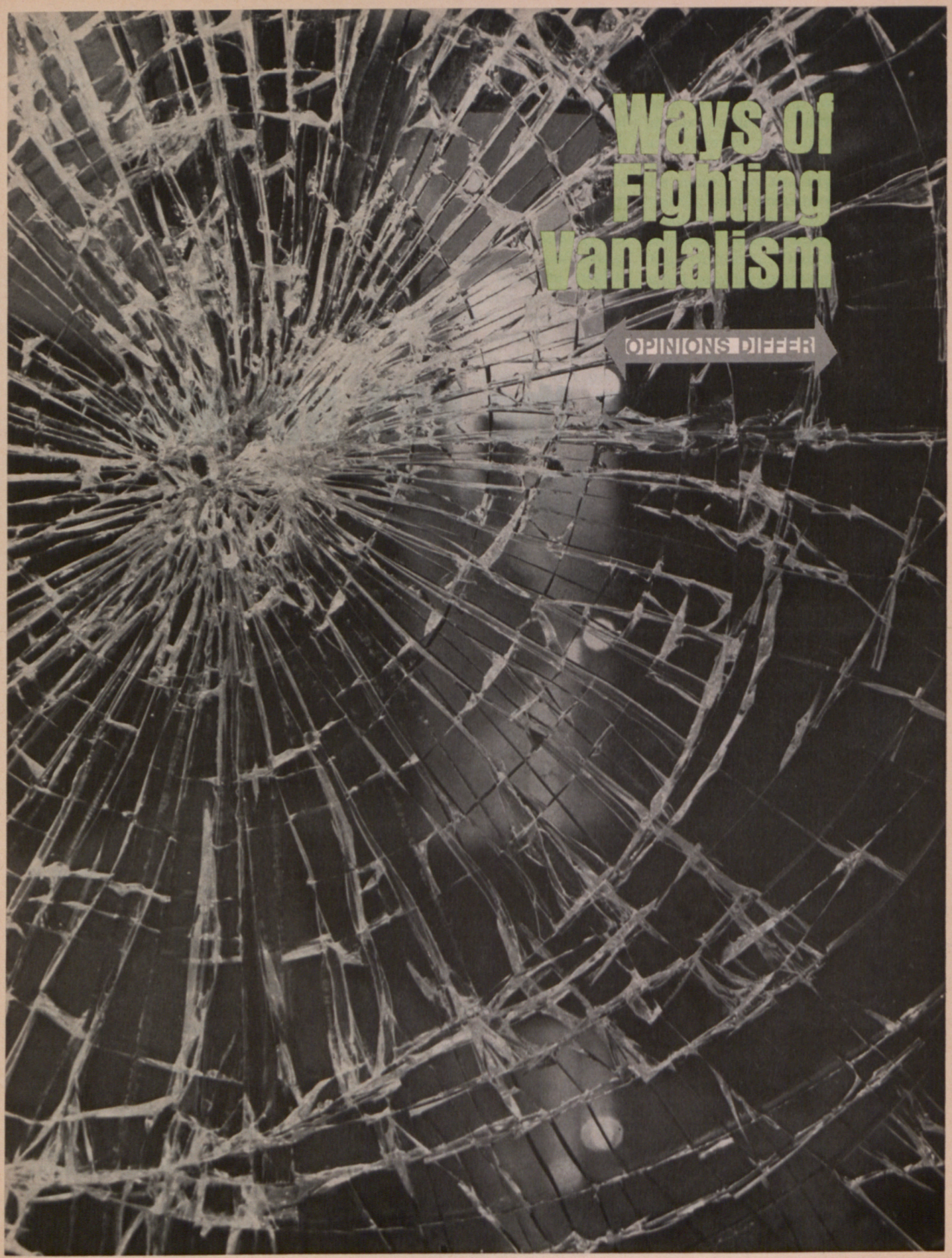
The NEA bill was introduced in the 90th Congress by Senator Wayne Morse (D-Oreg.), as S. 3400, and Rep. Arnold Olsen (D-Mont.), as H.R. 16939, and received enthusiastic support from many members of Congress. NEA has already enlisted the support of other organizations and is operating a continuing leadership training program among the states to promote the legislation.

The Legislative Commission believes that the NEA bill can be enacted by the 91st Congress. The teaching profession is solidly behind it. States and localities want it because for too long they have borne the major burden of school funding: During the 1967-68 school year, for example, localities put up 52¢ of every school dollar, state governments provided 40¢, and the federal government offered only 8¢.

What the NEA bill needs now is visibility and publicity. Each and every congressman and senator must be made aware of the need for and the public support of this massive new appropriation for schools.

You can help by encouraging discussion at local and state association meetings and at PTA sessions, as well as in the press and on radio and TV. Volunteer your help to the legislative committees in your state and local associations. Tell your neighbors about this important bill and make it clear to your state and government leaders that the bill has the unqualified support of the teaching profession.

And finally, write or visit your congressman and senators. Tell them of just one way you have seen education in your district improved by federal aid. And tell them of one important problem that continually nags your schools—a problem that could be solved if general federal aid were provided. In this simple way, you and millions of educators across the nation can give Congress a host of specific reasons why this major breakthrough legislation should be enacted. •



Ways of Fighting Vandalism

OPINIONS DIFFER

E. WADE UNDERWOOD, *president, Akron (Ohio) Education Association.*

• **Each community must use its own resources to** fight school vandalism. We in Akron have two tremendous assets: first, the fine young people who attend our schools, and second, a civic-minded organization called the Touchdown Club. Twice a year the two groups join together to conduct intensive campaigns when vandalism is most likely to occur—on Halloween and during the summer vacation.

The Touchdown Club's 1,000 members encourage greater athletic opportunities for boys and girls through better school programs. Members seek to give these youngsters a sense of responsibility for supporting fair play, decency, respect for law, and for applying the educational advantages afforded them.

To realize these goals, the club works closely with the city's high school students: It awards trophies to the high schools that adhere most closely to good sportsmanship objectives and holds mammoth football and basketball banquets to honor hundreds of young athletes.

Because the Touchdown Club works in particularly close cooperation with the student athletes, these students inevitably have become the main force in the student-to-student effort to prevent vandalism.

The Youth Vacation Vigil, as the schools' program is called, starts with the selection of two juniors and two seniors from each of Akron's 10 high schools to be area captains. At a Touchdown Club luncheon, these students meet with the highway patrol, the police force, and the school board to discuss the objectives of the vigil.

School captains, who are outstanding students or well-known athletes, are selected for each elementary and junior high school. Homeroom teachers supervise selection of individual chairmen for each class.

These school representatives—40 area captains, 71 school captains, and approximately 2,000 class chairmen—work to get as many students as possible to pledge that they take pride in their school, realize their responsibility toward it, and will see that no one harms it.

The area captains meet with the students in each school in their district at an assembly program or in the individual classrooms to explain the program and its aims. Before doing so, however, the captains receive special tutoring from the high school speech teachers, so that their presentations will be precise and easily understood. Because the area captain is usually a school hero, and because he makes a good impression, student response is almost 100 percent.

After signing his pledge card, a student may be given the task of posting signs in and around his school, which state "This School Can Be Protected by Responsible Boys and Girls" and which give the name and number to call to report accidental or willful breakage. Or, a pupil may be assigned to contact families living near the school to solicit their help in guarding school property. Householders willing to cooperate (and most are) are given cards instructing them to call the police and then their student contact when vandalism occurs.

When school is not in session, school captains are contacted by phone or by school attendance officers who patrol the school property. The chairmen's duties require them to be present at playgrounds or near schoolyards as often as possible—not to stand guard, but simply to observe. If there is trouble, chairmen are to call the police and stay out of sight. They are not to attempt to apprehend lawbreakers.

The "Fun *vs.* Vandalism" Halloween vigil is similarly operated, with emphasis on the student-to-student approach.

The entire program has proved an enormous success. Vandalism damage (increasing, prior to the vigil, by 10 percent a year; estimated to be $10,000 for 1961) was reduced by 15 percent during the 1962 campaign. By 1964, total damage was below $5,000.

This past summer, despite an increase in the number of schools, a greater use of glass in these buildings, and minor racial unrest within the city, the damage figure seems to have stayed near the $5,000 mark. This is a tribute to the Touchdown Club and the student-to-student efforts in fighting vandalism.

WILHELMINA B. THOMAS, *principal, Walker-Jones Elementary School, Washington, D.C., with her faculty.*

• **We at the Walker-Jones School have developed our** own secret weapon for fighting school vandalism—*student pride.* Our aim is to make people aware of the importance of conservation and beautification in the school community and in the city. We base our philosophy on the following objectives:

- To develop in students and parents a pride in the upkeep of their property
- To let participants share in planning and realizing the aesthetic needs of the school and the community
- To bring about an awareness that consistent care of surrounding areas—of plants, shrubbery, and flowers—is the prime factor in a successful beautification program.

The principal, the teachers, the pupils, and their parents worked together to meet these objectives.

Realizing that our methods would largely determine the results of our project, we set out to make each student an active participant in it. We did a great deal of planning in order to devise a number of ways to interest all the children.

Many class projects began with walks. Some groups toured the neighborhood to note litter-free yards and those with neatly cut grass; others simply trekked around the school. We took the children to the National Arboretum and to the U.S. Botanic Gardens to raise their levels of aspiration. The science and language arts teachers planned these outings cooperatively and organized them in such a way as to en-

courage the children to suggest improvements and ways to implement them.

We divided the area surrounding the school into sections and assigned to each section a class captain who was responsible for keeping his section free of debris; for removing weeds or dead leaves; and for planting new flowers, bulbs, or shrubs.

After choosing sites visible from their classrooms, each class observed and recorded all activities associated with restoring and beautifying the grounds. They painted huge panoramas of the neighborhood to show its distinctive characteristics, both good and bad. Later they made before-and-after charts and pictures.

The children were zealous ambassadors when it came to involving their parents. They conducted surveys in the neighborhood to locate families who wanted help with their yards and gardens.

For interested parents, the PTA held workshops guided by our science consultant, who showed how to start plants in terrariums and window boxes and then how to transplant the greenery to yards or gardens. Before the Christmas holidays, many youngsters made terrariums and window boxes to beautify their homes. In making Christmas cards and, later, Easter cards, they used pictures of plants from various sections of the school grounds.

Last spring we had a fine opportunity to extend our project further into the community. During the redevelopment of the neighborhood, a large fence was erected around an entire block where new apartments were being built to replace old dilapidated houses. The construction company gave permission for the students to paint murals on the fence and promised awards for the best artwork. Each class, from kindergarten to sixth grade, went ardently to work. Consequently, what was once an unattractive fence is now a series of bright-colored murals and designs.

We seize every opportunity to increase pride in the beauty surrounding our school. When families began moving into the new apartments, our science consultant and several children offered their services in starting gardens. For families desiring them, the children made terrariums and window boxes.

The faculty and community are proud of our ventures in leadership. The activity resulting from the program makes sense to the children. They feel free to express their feelings of wonder, pride, and concern about the school and community. The program also has enabled the teachers to improve instruction in how to communicate ideas and feelings and how to read with understanding.

Because of our positive approach, we had only a few broken windows during the school year and when school opened this past fall, we had only one. During the city's civil disorders last April, vandalism in our school and school community was negligible.

A student summed up the accomplishments of the beautification program:

- Fewer broken windows
- More responsible students
- Student pride in being Walker-Jones pupils
- Awareness of the need to maintain the program
- Desire to extend beautification further in the community
- Student willingness to work on projects that help keep the school beautiful
- Greater zest for working in groups on a purposeful activity.

Our beautification project isn't finished, say the students. It never will be, for "beauty is a demanding mistress" and pride is catching.

RICHARD R. CURREN, *teacher of English, Valley Forge High School; editor,* The Par-Vuer, *Parma (Ohio) Education Association.*

• **In these times of civil disorder and unrest, with** hostilities directed toward public institutions, alarm systems are necessary for the protection of public property.

Before 1965, Parma's school administrators didn't feel this way. Few of them believed that vandalism would strike this contented community of 100,000 people. Indeed, their stand seemed quite justified, since the system's illegal entries averaged just one a year, and its annual losses seldom exceeded $300.

While everyone smiled at their good fortune, trouble lurked in the shadows. Over one weekend vandals caused extensive damage to three schools: They defaced desks, smeared paint on walls and floors, broke windows and doors, and destroyed records. Almost overnight vandalism became a problem.

A shocked community and its alarmed school officials then decided they must take steps to prevent further malicious destruction of school property. The question was how to protect a $35 million public investment. One thing was certain: The cost of individual round-the-clock guards for each building would be prohibitive.

After much serious consideration of the problem, school officials developed the following five-point security system that protects all 30 buildings, is easy to administer, and is economically feasible:

1. Each principal informs the superintendent's office daily of any after-school activity in his building. All school personnel report immediately either to their principal or to the superintendent's office any suspicious person seen on school property.

2. Custodians are required to check and lock all doors and windows before going off duty.

3. Two security guards patrol 15 buildings apiece at least twice each night. Their routes crisscross at various intervals, but they take care not to follow a specific travel pattern.

4. The school system receives police patrol protection from the three municipalities that comprise the school district.

5. Each building is equipped with a radar alarm system.

Parma's alarm system was not designed to apprehend vandals, but to get them out of the school as quickly as possible with a minimum of damage to the

building. The system, which is turned on every night with a special key in each building, is composed of microwaves that set off a series of sirens when interrupted. Audible up to a quarter of a mile, these sounds are accompanied by flashing lights that can be seen both inside and outside the school building.

The alarms are set primarily to protect the office area, where most school vandalism occurs, but the radar microwave system is activated in the entire building once an illegal entry is made.

Is the alarm system successful? To date, the answer is an emphatic *yes*. Parma has once again returned to the rate of approximately one illegal entry a year, with damage in most cases amounting to no more than $300 to $400.

The system is successful partly because all school personnel take security seriously and partly because of the system's psychological effect on the young potential vandal, who fears what will happen if he is caught.

One sign of the system's success is that our insurance rates have remained constant while the rates of others with the same type of insurance coverage have increased in these times of unrest.

An amusing example of the effectiveness of the alarm occurred shortly after the system was installed in the board of education offices. The director of pupil personnel, returning one Sunday afternoon to catch up on some work, forgot to turn off the alarm. Before he could walk from the far end of the building to reach his desk, the police had arrived and cornered him. Only a call to the superintendent prevented his arrest.

ROBERT C. LLOYD, *director, Special Projects and Programs, Baltimore city public schools.*

• **In fighting vandalism, Baltimore city public schools,** like many other urban school systems, make use of window guards and plastic windows, fencing, outside lighting, reduction in window areas, expanded security staff, alarm systems, and playground cleaning with power sweepers to remove stones and other potential ammunition. But the multiunit relocatable buildings which we began using during the 1967-68 school year have added a new dimension to our attack on the problem.

Planned and erected with ESEA Title I funds, these air-conditioned buildings have exterior walls made of bright-colored and beautifully finished porcelain-enamel steel paneling and windows made of colored plexiglass.

Although the relocatable schools stand on the grounds of existing schools built with conventional brick and mortar, the permanent buildings have been heavily vandalized while the others, only 10 or 15 yards away, have hardly been touched. Apparently the beauty and colorfulness of the new buildings, which are attractively landscaped, have aroused genuine community pride. It is as though the residents are saying, "School officials care enough to let us have these fine buildings for our own use."

We believe that school-community relations have greatly improved as parents visit the relocatables and watch their children learn under almost ideal circumstances. We know that the children also regularly communicate their delight to parents and neighbors.

PAUL H. HOERLEIN, *principal, Columbia Elementary School, Seattle.*

• **How can schools control the rising incidence of damage to and loss of school property?** TODAY'S EDUCATION asked me that question because Seattle's J. J. McGilvra School, of which I was principal until I took over the principalship at Columbia this fall, is fortunate enough to have been scarcely touched by vandalism.

The easy way for me to answer would be to describe the building, student population, staff, and surrounding community and tell you that the school has remained unscathed because of its small size, relative isolation from business areas and main highways, and fairly high student-achievement level.

Local records indicate, however, that such characteristics are not what guarantee that a school will escape damage, since some large, centrally located schools with below-average student-achievement levels also suffer little property damage and loss.

The problem of vandalism is distributed throughout the city, with the fewest vandalism cases and lowest loss in dollar value occurring in the center-city area.

The next question, then, is whether the strategies employed by school principals and their staffs make a difference. Once again, investigations reveal that most acts of vandalism and theft are committed by those who do not attend the affected schools. This would seem to indicate that school personnel generally are effective in creating respect for property among their own students. When students are away from school, however, they feel less pressure to conform to established practices of law and order.

Who are the people involved in these acts of vandalism? Most are youths from 11 to 15 years of age who are low achievers in school and who may have a history of delinquent behavior. It seems clear that efforts of school districts to reach the low achiever—the eventual dropout, who finds it extremely difficult to succeed as an adult—must be intensified, since a multiplicity of social ills, not just vandalism, result from the frustration these individuals feel.

The Seattle district has had an active Security Department for several years. Recently the Department has experimented with alarm systems that use radar-and-sound monitoring controlled from a single center. Pilot installations in two secondary schools during the past year have produced significant results. The Security Department plans to extend the system to 30 schools this school year.

During normal daytime school operation the system will function as a direct-line communications sys-

tem between schools and the monitoring point in the administration building. Its primary purpose is to secure immediate help during times of problems of any type. Problems might range all the way from student disorders to physical plant malfunctions.

The secondary feature of this system is that after school hours, that is, during "quiet hours," the communications system becomes a burglar alarm network linking all schools to a central monitoring point. This central point then, upon receipt of an alarm from the school, dispatches its own personnel to meet police units to investigate the cause of the alarm itself. Property damage and burglary seemingly always go hand in hand, and it is difficult to ascertain which one brings on the other. Based on the experience of the school district during the past year's operation in two "high incident" schools, we project that the current system will not only pay for itself, but will act as a deterrent in all phases of this very serious school problem.

Until we turned to alarm systems, curbing vandalism in our schools had been the responsibility of each building principal and his staff. Some, like myself, have luckily been able to avoid severe problems; but we have no assurance that our luck will continue without intensive help for the low achiever and extensive security programs.

ROBERT J. BUCHNER, *English teacher, Alpena (Michigan) High School.*

• **Vandalism by school-age youth has not been a significant** problem in Alpena, a northeastern Michigan community of about 20,000 people.

Although many factors probably contribute to this fortunate situation, two of them outweigh the others in importance. First, though Alpena is highly industrialized, it is isolated from the urban areas in the state. Second, since 1963 the community has sponsored a project known as Community Schools.

The project was initially funded by the Mott Foundation of Flint with support from an Alpena industrialist, Jesse Besser, but the city's public schools subsequently assumed full financial responsibility for the program.

The Community Schools program aims at much broader goals than the elimination or control of vandalism. According to Larry McConnell, superintendent of schools, the project "is striving to involve all citizens, from preschoolers to senior citizens, in a variety of programs designed to meet their educational, cultural, and recreational needs."

The superintendent stresses that the program was instituted as *action* rather than *reaction.* It keeps buildings open and available for a broad cross section of people in Alpena. It utilizes instructional talents wherever they can be found—among doctors, shopworkers, teachers. It provides opportunities ranging from simple, spontaneous, unstructured fun in gyms and pools or on playgrounds, to academic classes in the arts and humanities, to courses in flower arranging, dog training, or trout-fly tying.

Citing a 12-month decline in vandalism cases, Andrew Frederick, chief of police in Alpena, sees Community Schools as "a very positive influence on the majority of the kids in our community." He also expresses faith in the ability of teachers—when and where they are involved in Community Schools—to minimize the need for police involvement with students.

The specific effect of Community Schools on vandalism in Alpena can be only a matter for conjecture, and no one claims that it is a panacea for all juvenile social ills. Nonetheless, the Community Schools concept has clearly contributed to Alpena's reputation as a community where kids have a basic regard for law and property.

JESSIE R. HARPER, *assistant principal, Burbank Junior High School, Houston.*

• **We are proud of our alumni and students, and we** like to tell them so at every opportunity.

We try to instill in our students a sense of pride in the usefulness and beauty of our schools. To help accomplish this, we keep our athletic fields and outside courts open to everyone after school and in the summer.

Once a month during the school year, our coaches give pep talks on honesty, pride, and good manners to all gym classes.

As for stealing, we tell the students that a thief has no friends and will steal from you at the first opportunity. We urge them to report any suspected thievery to us at once so we can do what is necessary to help the person overcome his difficulties.

In addition, at our request, policemen who were members of our football or basketball teams when they were students at our school talk to our gym classes about the immediate and long-range effects of one simple act of thievery.

We also request students to bring their parents to check and see if their children are taking proper care of the buildings and grounds. And we ask parents to encourage students to take care of the facilities, so that they will be in good shape when these youngsters have become parents and their children are attending the school. We invite our alumni to keep coming back after they graduate, to make this same check and talk over old times.

As a result of these measures, very few people have broken into our school during its 21 years of existence. Both the physical plant and the grounds remain beautiful. •

The Educational Research Service, in "Protecting Schools Against Vandalism," *(ERS Reporter,* August 1968) tells what the Service learned in its inquiry regarding devices and policies that school systems use to protect their buildings. Included is an excellent selected bibliography. Readers who desire copies can obtain them for 25¢ apiece by writing to the Educational Research Service, NEA Center, 1201 16th Street, N.W., Washington, D.C. 20036.

Seminar/Autolecture

ARTHUR I. BERMAN, *professor of physics, Rensselaer Polytechnic Institute's Hartford Graduate Center; in 1967-68, Fulbright Professor of Physics at the Technical University of Denmark.*

• **In helping the almost desperate** attempt of education to cope with unprecedented numbers of students, and to prevent the costs of schooling from further skyrocketing, two technological innovations are now having their day.

The first innovation is instructional television, which places the student face-to-face with a stream of electrons that bears a remarkable resemblance to a teacher. It looks like a teacher, it talks like a teacher, and it writes on chalkboards. It enables a million people to receive instruction at the same time.

But receiving instruction is only part of getting educated, and that's where TV has its main limitation. Another limitation is the sheer effort and cost and time required to make a satisfactory permanent video tapelecture.

And after you have made it, when do you revise it, bring it up-to-date? Of course, if it's run for a hundred thousand students or more, it's worth a lot of time and effort and the cost per student is almost nothing. But what of the few hundred students in an esoteric course? Who will make TV tape for them? And how do you complete the education process once you've begun it this way? How does the student at the passive end of a TV tube fit into the picture?

The second educational innovation is the sophisticated, computerized teaching machine. Its main duty, as for all programed instructional devices, is to transform the passive note-taking student into an active learning one. It recognizes and seeks to overcome two basic shortcomings of conventional teaching: (a) the lack of continuous student interaction with the subject presented, and (b) the presentation of the subject to the group at the presumed average pace of the group.

Involvement is the key word in modern education, but it's older than John Dewey and Maria Montessori. It's present when a physics lab student slides his blocks down an inclined plane or when a nursery school child fingers *his* blocks; when a high school student struggles with his algebra homework or when a student of French buys a meal in a Paris cafe. It's present in all these places, except in the lecture hall, where we need it most.

Involvement is present also when we watch television. We're involved in the flickering mosaic image—and the *fine* lines are filled in by *us*, not the streaming electrons—just as we would be involved in the lives of our favorite cartoon characters. Listen to how Marshall McLuhan describes a medical operation on television:

"In closed-circuit instruction in surgery, medical students from the first reported a strange effect—that they seemed not to be watching an operation, but performing it."

In many respects, TV instruction can be more involving than the real

The author's forthcoming book, *Balanced Learning*, contains further amplification of the Seminar/Autolecture system.

thing—if it's done with style. Unfortunately, however, style takes time and effort and costs money, so it's rarely achieved.

Programed instruction contains the quintessence of involvement. It motivates the student to answer questions that are put to him in a systematic manner. And it enables him to check at once the correctness of his responses.

The motivation comes about because, first, the questions increase only slightly in difficulty each time, so the student has a fairly good chance of answering them all correctly and progressing happily through the subject matter. The second reason for his motivation is that the student responds at his own pace; no one holds a stopwatch. He moves through the program as fast or as slowly as he wishes. Third, no one holds a club over him if he gets the wrong answer. He receives no bad grade; no one dumps him out of school—or society. In short, the natural joy of success provides the motivation.

The electronic computer is the ultimate teaching machine. Not only does it sequence the questions and issue the correct answers, but it analyzes the student's responses by comparing them with the correct answers, and it judges which route the student ought now to follow—that is, what shall be the next question, or series of questions—just like a real-live tutor.

But a live tutor can do more. He responds to the student's *own* question. It's asking quite a lot of a computer to be programed for all possible varieties of inquiries, yet perhaps the day is not too far off when it will be. In any event, we can be sure that the student does develop self-confidence by interacting with the computer—that is, interacting with the *programmer* behind the computer, who is, after all, the missing human element.

But in a real sense, the human element *is* missing, and that's one of the drawbacks of computerized instruction. Within its memory core, the electronic computer can contain the knowledge of a hundred tutors, the wisdom of some of them, but the inspiration of none. Missing too are some of the intangibles of media involvement—the displays on the teacher's desk, the excitement of the demonstrations, the colorful wall charts. And the sense of participation with other students may be lost in the isolation of the carrel.

Two more drawbacks work against both TV and the computer. First, the teacher must adapt to the system, not the other way around. His role must be that of commentator, or interpreter, of other people's work. Well, why not? goes the argument. He does this for the textbook anyway, so why not have him continue in this role and let the teacher on the screen or behind the program run things?

This may be a reasonable point, but most teachers would be loath to concede that their textbook-writer colleagues make the best teachers, let alone that the TV showman or the machine programmer does. With the textbook, the teacher can at least select separate passages for study—the parts he understands well—much more easily than he can with a videotape or programed computer.

The second drawback is the difficulty of revising the course to keep it up-to-date. Subjects change, ideas change, points of view change, but the videotape remains unchanged—unless someone gathers together the cameraman, the electronic manipulator, and the teacher to make that two-minute insertion. A computer program is somewhat easier to alter—but not by the teacher.

If we mix together what we have learned in the past several years about the "message" and "massage" of media, and then add the programed-instruction revolution and recent technical innovations that have taken much of the drudgery out of teaching, we can end up with a radical new system of teaching at all levels—from elementary school through graduate school. I call this new system Seminar/Autolecture.

An Autolecture is a synchronized coupling of a cassette tape recorder, a wide-range amplifier, a high-fidelity loudspeaker, and an overhead projector, all capable of filling a whole room with a clear sound and a whole wall with a brilliant image, even with the room lights on. It can also tie in an 8mm film-loop projector, to show things in motion, like a swinging pendulum or the orbit of a satellite. [Readers wishing more detailed instructions on preparing an Autolecture should check the free offer in "Extras for Our Readers," p. 88.]

What's so special about an overhead projector and a tape recorder? (Why not a filmstrip and sound track? Or lantern slides and phonograph records?) It's very special, for an Autolecture can be composed by the teacher, after a little practice, in just a few minutes more time than it takes to carefully prepare a conventional live lecture. And the teacher can alter it, update it, or correct it in even less time.

Autolecture style—the personal microphone technique and the casual but clear visual projections—takes a little practice for the teacher to achieve. But it is well worth the effort. Although the facial expressions and gestures of live and televised teaching are missing in the Autolecture, the teacher's personality does emerge, and without the possibility of his distracting students from the visual presentation. Paradoxically, the ultraneat, precisely modulated effort is the hardest to produce—and the *least* effective. It is not expected that the teacher-programmer will be an instant expert, nor is this necessary. Even a simple question-answer format is a welcome relief from the often colorless conventional lecture.

You end up with something very casual, conversational, freehand-drawn, colorful, and highly engaging. You're involved, at the moment, in what McLuhan would call a "cool" medium.

Yet as simple as the Autolecture appears to be, there's a wealth of subject matter in it. All the fumbling about for the right words, all the false starts, have all been wiped out. A more thorough development has been substituted in its place.

Now add one item more to make the involvement complete—an active interaction with the presentation, to keep the subject alive (and the audience too, in case anyone has turned off). The active interaction is in the form of programed instruction that's been intermixed with the exposition. It consists of a series of

questions and answers, properly sequenced for progressive understanding, and with pauses after the questions to give students a chance to respond before they see and hear the answers.

An Autolecture contains elements of two types of programed instruction. The first is associated with the name Norman Crowder. In the Crowderian type of instruction, the student is presented with a statement, then asked a question, and then given a set of plausible answers. Only one answer is correct, and he is asked to select which one it is. If the right one is selected, the next question is displayed. If a wrong one is selected, the student is told why it's wrong and may be treated to a special set of questions intended to clear up his false notions before he continues. (In a classroom presentation, the correct answer is displayed after a reasonable pause, and an erring student is merely advised to study remedial material.)

In the second type, named after Professor B. F. Skinner, instead of selecting an answer out of plausible ones, the student constructs his own answer by, say, filling in a missing blank in a sentence. Sometimes the answer is obvious, but at least the student wrote it out himself.

Here is an example of Skinnerian programing. Question A: "A stimulus device presents some information to the learner. A slide projector is a ..... device." You have 10 seconds to fill in the correct answer. No one would take you for a genius if you wrote the word *stimulus* in the blank space. After all, you got a pretty good hint (called a *clue* or *prompt* in programed-instruction terminology). But the act of writing it down will help you remember it, and you might feel just a tiny glow inside if you discover that what you wrote agrees with the correct answer that has been unveiled. So, armed with this bit of satisfaction, you go on to the next question:

"A response device presents the learner with the opportunity to practice some activity. A typewriter or a desk calculator is a ....." Ten seconds to write in an answer. Maybe this was a tiny bit harder. You had to write two words this time. Keep moving:

"A teaching machine presents information to the learner *and* requires appropriate action on his part. It is therefore a .....-..... device." Ten seconds. Now here you had to invent a new word: *stimulus-response*, based on what you have learned in the two questions that led to this last one.

Suppose I should collect and analyze all the responses and discover that only 70 percent of the audience got the right answer. I'm in trouble, because this means that the programed material is too hard, and too many people are getting a bit annoyed at themselves and the programmer. So the next time I run this program I'm going to write the missing blank this way:

[s.....-r.....]

and hope that 90 percent of my audience comes through with the correct answer.

Probably the most important feature of the Autolecture is that students can put on headphones and run through the whole show in the library or even at home, using it as a teaching machine for a preview or review. The Autolecture then becomes not merely a stimulus-response device, but a stimulus-response device that's self-paced, so it has all the characteristics of a teaching machine. It even permits the student to switch to remedial material before continuing with the course.

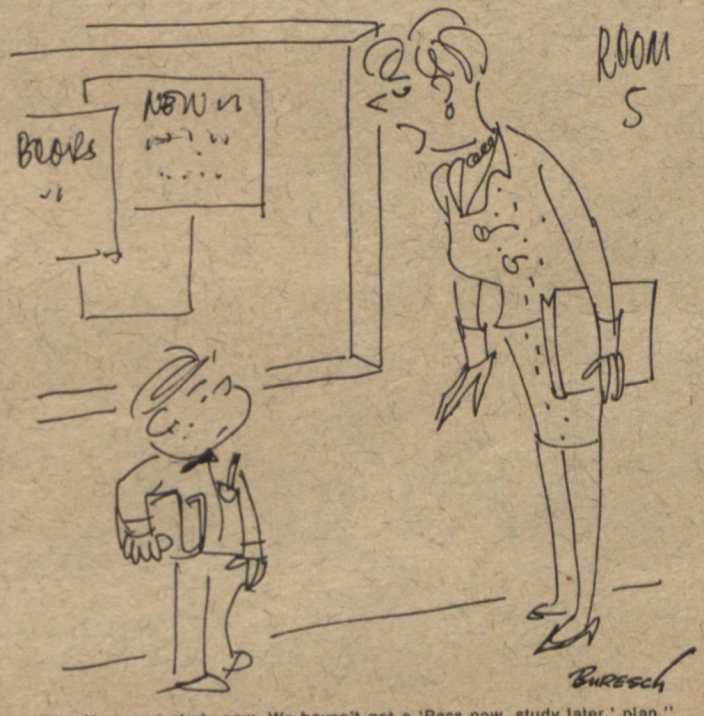
The Autolecture is just half of the Seminar/Autolecture. (The Seminar comes first in importance, though it is second in time sequence, hence the name *Seminar/Autolecture.*) This is how the system works: Let's take a class of 40 students and divide it into two groups of 20 each.

Now send Group A into the Autolecture room without a teacher. The moderator-of-the-day, a student or assistant, inserts the transparencies on cue from the loudspeaker. As it's a nonthreading cassette recorder, all he has to do is press a button. A student in the group suddenly has a question in the midst of the presentation. At this point, he has two alternatives:

1. He can raise his hand, wait for the moderator to press the "hold button," and then ask the group. If it's a question basic to understanding the Autolecture, someone is sure to answer it—otherwise the teacher just hasn't done his job at all.

2. He can write the question down and turn it in to the moderator unsigned for later submission to the teacher.

When the programed instruction begins, the student responds on carbonless duplicating paper. He retains his original, submits his dupli-



"No. You must study *now*. We haven't got a 'Pass now, study later,' plan."

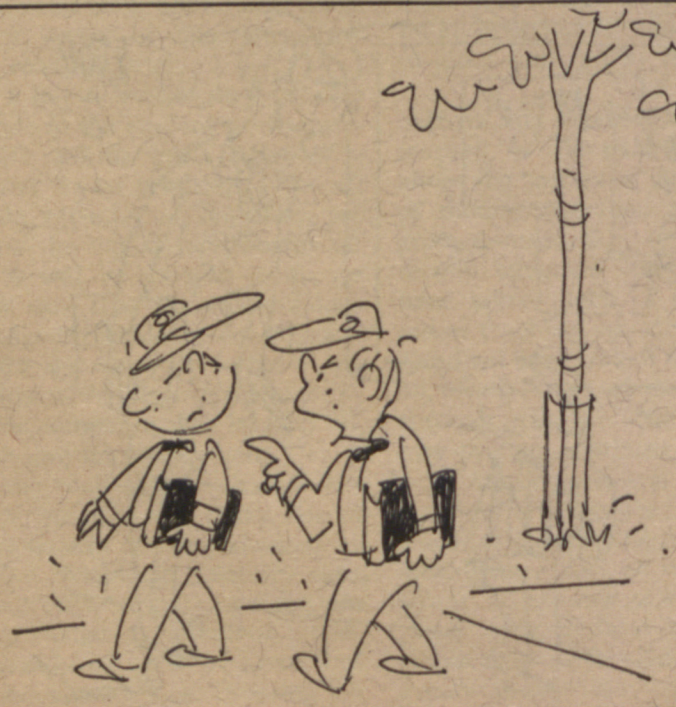
cate, *unsigned*, to the moderator who later gives it to the teacher. The correct answers are immediately projected on the wall and discussed on the recorder, and the student corrects his original for his own file. The teacher later surveys all the duplicates in order to revise the programed instruction, if it seems to be necessary.

When the Autolecture is over, Group A goes into the seminar room. This time the teacher is present. He has sorted out the Autolecture questions and can give thoughtful replies to them. Homework is gone over; other student questions are answered by give and take while the students and teacher sit around the table. (Remember there are 20, not 40 students in the group.)

While A is in Seminar, Group B may be in Autolecture—the same one A was involved in—and at the close, B too goes into Seminar. (Of course, A and B may be scheduled at different hours if preferred.) Having prepared the Autolecture perhaps a year or two before, the teacher has eliminated this routine from his duties. He can concentrate on the really enjoyable part of teaching—personal guidance. If he wants to, he can even sort the students into the groups by background and run the course at two different levels. Or he can run two different courses simultaneously (or even run the class entirely as Group A all in one room and have no Group B at all).

What about exams? They are frequent and short, perhaps weekly. Their main function is self-testing of the student and maintenance of his involvement in the course. The exams, by the way, are also written on carbonless paper—and so is the homework. The *signed* duplicates are submitted—correct solutions are projected at once—and the student grades his own paper, the carbonless original. Again he gets immediate knowledge of the correctness of his responses, a primary requisite of learning theory.

No longer does the teacher in this system have to spend endless hours with piles of exam papers trying to calculate an exact grade for each one. No longer do examination questions have to be contrived in order to fit into someone's pet grading scheme. Instead, the teacher uses the examination for periodically checking on the students' comprehension of ideas, of crucial principles. Each student is then advised of his progress—though he already has some idea of it from his own autograding of the carbonless originals. His final grading category reflects the progress he has made: His performance is rated as "Completely Satisfactory" or "Incomplete"—or for the few who display unusual progress or originality of thought, "Outstanding."



"... And it's literature when they take the pictures out of the book."

What then is the promise of Seminar Autolecture? First, it deeply involves the student: He is engaged in a presentation he can see and hear clearly that emphasizes the *structure* of a subject and is directed personally at him. He responds to the stimulus of programed questions. In addition to any notes he takes in class, he is given copies of the visual portion of the Autolecture. (These may be full-sized or reduced to fit 9 or 16 on a page. Such "micronotes" are then read with a magnifier.) He takes part in informal small-group discussion, sitting around the table with the teacher, seeking out the essential concept, the original idea.

Second, it offers a practical means of eliminating what educational psychologists call *aversive reinforcement* (motivation by the threat of punishment) in the form of low grades in grading systems which too often prove to be harsh and unreasonable. In short, motivation is positive: It comes about through the self-confidence that learning progressively at one's own pace brings.

Third, it is a flexible system. It opens up two avenues for the teacher: to use Autolectures that have been made elsewhere by specialists, selecting excerpts or updating them if he wishes, or to compose the Autolectures entirely on his own, editing them by evaluating the student feedback, all with minimal effort.

Fourth, Autolectures can be supplied to regions where teacher shortages exist, as in developing countries. They cost a tiny fraction of a TV course, can be viewed by the students far more easily, and can be edited and updated by the teacher himself.

Last, and far from least, they elevate the role of the teacher. By ridding him of enormously time-wasting duties, such as making statistical evaluations of students or giving the same lectures over and over again, day in and day out, year in and year out—by getting rid of all this sort of thing, he can devote his time instead to really educating large numbers of students with far less effort and increased personal attention for all. •

The rush is on. From their mobile carts stationed at the school gates, roadside vendors do a heavy traffic in snacks and drinks.

AFTER-SCHOOL SNACK IN A THAI SUBURB

Whatever the continent, when the bell rings at the end of the school day, pupils are hungry. Like their American counterparts, these children from a middle-class suburb in Thailand enjoy a pause that refreshes.

One rambutan, please. This pleasantly acid tropical fruit—just one of many to choose from—is a big favorite with Thai children.

Watch your manners! A young lady scolds her brother for trying to get into the ice chest where the frozen fruit juice sticks are kept.

Right: Dried squid is great, too. Pick one out, and the vendor will grind it up for you and heat it over charcoal in an earthenware bucket.

OPENING THE COLLEGE GATES TO THE LOW ACHIEVER

WILLIAM MOORE, JR., *associate dean, General Curriculum, Forest Park Community College, St. Louis.*

• **Since I grew up in the ghetto, was a two-time high** school dropout, was in the lower tenth percentile when I enrolled in college, and was graduated third from the last in my undergraduate college class, I can justifiably describe myself as having been academically unsuccessful. Add to these credentials the fact that I am a Negro, and I believe you will agree that I can speak with authority and conviction on the subject of the educationally disadvantaged student.

Each year thousands of low achieving students enter adult society with "worthless" high school diplomas. Many of these students have been sold on the purported value of the diploma, but they will not receive any reward for acquiring it. For a few good students, the diploma is a passport to college; for some others it leads to a union card and the world of work; but for far too many, particularly Negroes in the cities, it is no more than an attendance prize. Its holder cannot get into college or into desirable areas of the work world. Such students, who are denied additional schooling, who cannot go to work, and who are vulnerable to the draft, are potential dynamite.

Though the academically unsuccessful come from all races and social classes, a disproportionately large number come from minority groups, especially from the Negro race. They often live in ugly cities. They come from broken homes, dilapidated housing, seething streets, and crippling schools. Only a few of them are motivated toward education. Most of them feel rejected, almost all of them have experienced some failure, a considerable number have been poor, and few of them have had a second chance at an education.

Many people say that our institutions of higher learning are shutting out or flunking out too many kids in a society in which the number of unskilled jobs remains about the same while the number of unskilled persons continues to increase. In addition to producing trained professionals, is higher education turning out enough other people with different marketable skills?

With all its resources and all its expertise, higher education has shown little concern for disadvantaged youth. College people have insisted that they are doing what they are supposed to do. They have rejected the awesome burden of trying to salvage students who are "unqualified" for higher education. Traditionally, they have recommended that some other "more appropriate" educational agency should try to reach students judged academically unsuccessful. Only a few have asked soul-searching questions—and found challenging answers.

In this decade, what constitutes a bona fide educational opportunity for the socially and economically disadvantaged that would be beneficial both to the student and to society? It certainly cannot arise from the traditional attitude of higher education that says to these young men and women, "This is what we have to offer—take it or leave it." Few of the inept can take it; too many of the unmotivated leave it. And educational experience for these students has to be significant.

Dr. Moore spoke at greater length on this topic at the 1968 National Conference of the American Association for Higher Education (an NEA department).

The disadvantaged—by the sheer magnitude of their numbers and the insistence of their voices—have created a climate where higher education can no longer remain comfortable with its habitual position of scholarly detachment. Consequently, a social and academic revolution is beginning to affect higher education. In its vanguard are new theories and techniques for dealing with the marginal students. As a result of the increased emphasis on higher education for the masses, community colleges are springing up at the rate of 50 per year. And some are stressing an open-door policy—one that will admit students who were underachievers in high school, those with limited ability but high motivation, and those who are culturally and economically disadvantaged. This is a dramatic change for higher education, although Negro colleges have long provided educational experiences for such students. Upward Bound and similar groups are also operating on many college campuses, but the fact that such programs are too few needs no documentation.

Believing they had a responsibility to serve the marginal student, Forest Park Community College's board of trustees, president, administrators, and faculty decided to accept the open-door policy and the challenges it presents. (Such a policy *must* have commitment from the top down.) Assisted by grant funds from the Danforth Foundation, they structured a truly imaginative program—the General Curriculum: A Program for the Educationally Disadvantaged —which attracts financial aid from public and private sources.

General Curriculum is an experimental program developed on the premise that the student who enters it will need simultaneous assistance in the basic academic skills (reading, mathematics, grammar, and composition), and personal enrichment and adjustment to self and society. The program provides this assistance through programed learning, general education classes, and guidance techniques—including careful and proper placement (into college curriculum, an existing training program, or directly on a job).

Located between the city and the suburbs, the college's General Curriculum Division attracts both Negro and Caucasian students from both directions. Poor and affluent students alike are assigned to this program on the basis of two criteria: high school rank at graduation and percentile rank on the School and College Ability Tests (SCAT). *These ranks must be in the lower third and the tenth percentile or below, respectively.* To be assigned to the General Curriculum, the student must meet both criteria. He is not, however, locked into the program. If he makes satisfactory progress (B–) after a semester or a year in the program, he may move into the transfer, technical, or career programs.

To solve the basic skills problem, the college offers a multimedia approach to programed instruction. All instruction in our Programed Materials Learning Laboratory is individualized. Each student proceeds at his own rate and works only on those skills in which he is deficient. His periodic examinations are spaced for maximum reinforcement; he always knows at what level he is working and where he must go to reach his objective. We place on him the burden of responsibility for assimilating the material. (The present Laboratory has auxiliary laboratories in writing, mathematics, and reading. And we have added a psychologist to the PMLL staff to diagnose learning problems and to prescribe remedial procedures appropriate to the student's learning style.)

Forest Park Community College readily observed that educationally disadvantaged students know little about events beyond their day, beyond their age group, beyond their neighborhood. Thus, they lack both an understanding of the total contemporary culture and a basic historical frame of reference. Therefore, for personal and cultural enrichment of these students, two teams of teachers developed (and continue to develop and evaluate) a one-year program of general education designed to provide their students with a stimulating and successful classroom experience. These teams have interest and experience in working with low achievers.

The marginal student is frequently antagonistic, hesitant, and indifferent to the educative process. These attitudes are compounded when the curriculum content fails to touch him in a direct way. For these reasons, material for the general education courses is chosen in terms of its relevance. (Students would be unmotivated either to understand when Ptolemy lived or to appreciate the influence of his cosmological theory. According to one General Curriculum student, "Ptolemy goofed with his theory of the universe, anyway—so why be bothered with him?")

We use no textbooks in these courses. Instructors choose their materials from current articles and other supplementary readings that are interesting, timely, and provocative. The content of one course is not isolated from the content of other general education courses. Rather, each course is structured around five broad headings: orientation, self, self and society, human relations, and values.

Each team has a weekly conference, which gives its members an opportunity to evaluate a student's progress with every other member of the team, including the counselor who works with the student. Every teacher also has a chance to determine whether his material correlates adequately with the content other team members are presenting. He also can discuss, compare, and exchange teaching techniques that have been effective in instructing General Curriculum students.

In guidance—one of the most cohesive factors in the program—a low student-counselor ratio ensures that students can be seen at least once a week or daily if necessary. Students attend guidance classes two class periods per week—to appraise their attitudes and their abilities. The counseling program is student- and community-centered rather than institution-centered. This implies that counselors are trained to know intimately all facets of the community so that its total resources are at the disposal of the educa-

tionally disadvantaged student. People from business, industry, the professions, labor, and management meet with our students, answer questions, and provide information about requirements for employment and opportunities for advancement.

Other features of the Forest Park General Curriculum program include:

- A deliberate plan to work with the deprived community
- Provisions for articulation between the high schools, community, and the college
- Remission of fees (tution, books, and so forth) for needy students
- Employment of a full-time social worker
- Internships (with stipends) for prospective college-level teachers of the disadvantaged
- Continuing workshops for in-service personnel and workshops on a national basis for those interested in learning techniques of the program
- Access to expertise (in terms of consultation) and funds to experiment and develop a model program for the educationally disadvantaged across the nation.

The essence of our program cannot be captured in this short article. It is more than an educational program. It is people—creative people who have endured the frustrations, conflicts, dilemmas, and dynamics of human interaction. It is the long hours, coffee-stained tables, overflowing ashtrays, skipped lunches, and forgotten dinners; the endless meetings, conferences, memos, reports, and deadlines. It is the persistent challenge of *doing* what we didn't know could not be done.

And it is also the conversion of an English teacher into a programed-learning expert by trial and error, the small successes, the blundering into a new technique or procedure that worked, and unsolicited letters from students who said they were helped. All these are the human ingredients.

At this point, we lack definitive research that will tell us exactly where each student has gone and how each has performed after involvement in the General Curriculum. But we do know that many students now view education and their individual abilities in a positive light, that they no longer perceive education as an experience of frustration and failure.

Even though the St. Louis humidity is unbelievable, grandmothers who have deferred their education for many years come to learn. Fathers, after the day's work, come to perform the computations in fractions that the fifth graders they leave at home have already mastered. Some come because they want to earn more money on their jobs. Others come because they are bored. Somehow, they all accept the inconvenience. Neither the blond kid who cannot master decimals nor the black one who consistently fails to make subject and verb agree complains. And this makes it all worthwhile. •

RESEARCH CLUES

This regular monthly feature of brief research summaries is designed to encourage the teacher to become familiar with significant research in education and to conduct action research of his own.

Although knowledge of research findings in instruction can be helpful to the teacher in developing his own instructional program, he needs to remember that research studies on a particular topic do not always agree and that no single study or series of studies should be considered to reveal the final answer.

This month's summaries are based on reports contained in the September 1968 issue of Research in Education, *which is published monthly by the Educational Resources Information Center (ERIC) of the U.S. Office of Education. The accession number of each document on which these summaries are based is given to facilitate further investigation by the teacher.*

What does research say about planning and organizing learning activities?

A survey of research in programing instruction made by the Baltimore (Maryland) County Board of Education suggests that teachers should:

1. Avoid overloading high-ability students
2. Avoid underloading average and low-ability students
3. Plan their teaching around the expected student response
4. Expect learners' responses appropriate to the learners' background
5. Develop learners' skills first, to be followed by their use in meaningful situations
6. Involve learners in meaningful activities appropriate to the learning task at hand
7. Consider intelligence as only one of a complex of factors influencing the level and pace of learning
8. Avoid taking for granted that what is obvious to the teacher is obvious to the learner
9. Strive to keep instruction orderly, coherent, articulated, and meaningful
10. Constantly evaluate the two-way communication between teacher and learners. ED 018 187.

Is an individualized reading program helpful in the teaching of literature in high school?

As one means of teaching literature, individualized reading has proven particularly effective in stimulating students to read on their own—as an experience rather than as an exercise—according to Bruce C. Appleby reporting at the 1967 annual convention of the National Council of Teachers of English.

He said that at the Keokuk, Iowa, Senior High School individualized reading is a teacher-guided program in the reading of fiction which allows the student to choose what he reads over a continuous period of time. Individual conferences are held periodically to discuss the books the student has read and to check his progress. After such a senior course had been taught for only one year, 85 percent of the incoming seniors requested to take it.

Appleby concluded that when individualized reading is used in conjunction with other methods of teaching literature, it appears to increase students' enjoyment of, feeling for, and understanding of literature. ED 018 411.

Is there evidence that summer enrichment programs really help disadvantaged students?

An evaluation by Rebecca S. Vreeland of Harvard University of a six-week summer educational enrichment program in Boston for disadvantaged students ranging from preschool to grade nine found that, despite the shortness of the sessions, progress was made toward reaching the goals of the program. The goals included increasing students' verbal and nonverbal creativity, developing student cooperation and tolerance, developing more positive attitudes toward school and toward authority, and bettering the work habits of the students.

Teachers for the 445 participating students were given a share of the responsibility for curriculum development, teaching methods, discipline, and daily routine. ED 018 502.

THE MIDDLE-SCHOOL MOVEMENT

EMMETT L. WILLIAMS, *associate professor of education, University of Florida, Gainesville.*

• **How can we best serve the educational needs of** pupils who are no longer children and not quite adolescents? In trying to answer this question, some school systems are making modifications and improvements within the present organizational framework. Others, making basic changes in the age-grade range included in the school for middle adolescence, are establishing middle schools.

Everyone is familiar with the junior high—its genesis, its development, its many successes, and some of its problems—but the new middle school is less well-known. What is it? How widespread is the movement? Are there common characteristics of the program nationally? What are some of the emerging directions of the middle school?

My colleague, William M. Alexander, an early proponent of the middle school, defines it as "a school providing a program for a range of older children, preadolescents, and early adolescents that builds upon the school for earlier childhood and is linked to but different from the school for adolescence."

Very simply, the middle school consists of the organizational and program arrangements for pupils ranging in age from 9 through 14—ages 10 through 13 being most usual. Middle schools typically house grades 5 through 8, although several other age-grade patterns exist in practice. As with most innovations in institutions, the middle school is characterized by extreme variety. However, despite the fact that middle schools probably differ from one another more than they resemble one another, they do have some features in common.

One shared characteristic of the emerging middle schools is an attempt to combine the best features of the self-contained idea of the elementary school with the best features of the specialization of secondary schools. A large number of middle schools, especially in the East, have fifth and sixth grades that are largely self-contained and seventh and eighth grades that are essentially departmentalized.

Sometimes this plan breaks down and preserves just those features of the status quo—over-isolation and extreme departmentalization—that gave impetus to the middle-school movement in the first place. One middle school, for instance, has fifth and sixth grades on the first floor and seventh and eighth on the second, and the two staffs never have occasion to speak to each other.

Some schools manage to effect a better transition than this. The Chippewa Middle School in Saginaw, Michigan, achieves planned gradualism by assigning fifth graders to a completely self-contained classroom with one teacher.

In the sixth grade, although the students are assigned to one classroom and spend most of their time with one teacher, the teachers work in informal teams, and students move about to a moderate degree in groups of different sizes and types arranged by the teacher teams in accordance with pupils' needs. A student becomes acquainted with several teachers and different groups of children while remaining essentially attached to one teacher and one room.

Still another pattern for combining the advantages of typical elementary and secondary practices is one that schedules pupils with a home-base teacher for a block of time and then moves them out to special teachers and laboratory centers. The home-base teacher is coordinator of the students' several program components. This arrangement provides every student with a teacher who knows him well and at the same time gives him contacts with teachers who can help him develop special competence in particular fields of interest.

The Community Middle School at Eagle Grove, Iowa, has instituted an adviser-advisee program to help develop a strong teacher-pupil relationship. Each member of the faculty acts as an adviser to no more than twenty students. This gives the student one

adult to relate to for the four-year span of the middle school, while he may be studying with a dozen or more teachers in special areas.

Another characteristic of the emerging middle school is the emphasis on self-understanding. To this end, the instructional program frequently includes units on the special concerns of young adolescents. Increasing numbers of middle schools are using various modifications of what are coming to be known as *encounter groups*. These are discussion groups led by an adult with special training and focusing on topics and issues identified by the young people themselves.

Still another observable common characteristic of middle schools is the definite, planned emphasis on greater student self-direction and self-responsibility for learning. Nearly all of the new middle schools have some form of independent study plan.

For example, two middle schools in Centerville, Ohio—the Hithergreen Middle School and Tower Heights Middle School—have developed a highly creative approach to student self-direction through the concept of student-structured time. At the beginning of an individual student's program, all his time is scheduled for him. After he has had experience in independent study skills and techniques, a portion of his weekly schedule is devoted to activities of his own choosing or design. The more he demonstrates the ability to manage his own time, the more time he is allowed to structure or schedule for himself. Independent study need not be individual study. Often, two or three pupils working together on projects can stimulate and teach each other.

Middle schools are finding the independent study phase of the program rewarding but difficult to develop. Independent study can become busywork, or students may develop the unreal, superficial attitude that only those projects they have chosen have merit. Undoubtedly, too, there is a certain amount of inefficiency in such a program. Middle schools are finding that a successful independent study program requires in-service preparation for both teachers and pupils.

Among the reasons advanced for a reorganized middle school was the need to escape the unwholesome pressures of too-early senior high type activities and the interscholastic rat races that often plague many junior high schools. Middle schools across the nation have succeeded, for the most part, in rejecting inappropriate activities. Few, however, have come up with appropriate alternatives.

The elimination of interscholastic athletics, for example, has not yet been matched by the initiation of an appropriate preadolescent activity. This area calls for the investment of much more time and creative thought.

Several innovative features common to middle schools are a result of the timing of their birth. Since the middle-school idea developed rapidly in the 1960's, it was only natural for these schools to adopt the educational innovations of the 60's—team teaching, nongrading, flexible scheduling, programed instruction, laboratory facilities, and a host of newer media.

It is difficult to find a middle school that isn't using some form of team teaching. Although these schools seem to have solved some of the expected difficulties in team teaching—the mechanics, the scheduling of students, the added time requirements for planning, and the complexities of group evaluation—some of the unexpected problems haven't been dealt with so well.

A major problem of team teaching in many middle schools has been the failure to identify specifically and completely those things that team teaching can accomplish. Too often, teaming has been an end in itself. Furthermore, educators have underestimated the complexities of the group dynamics of team teaching.

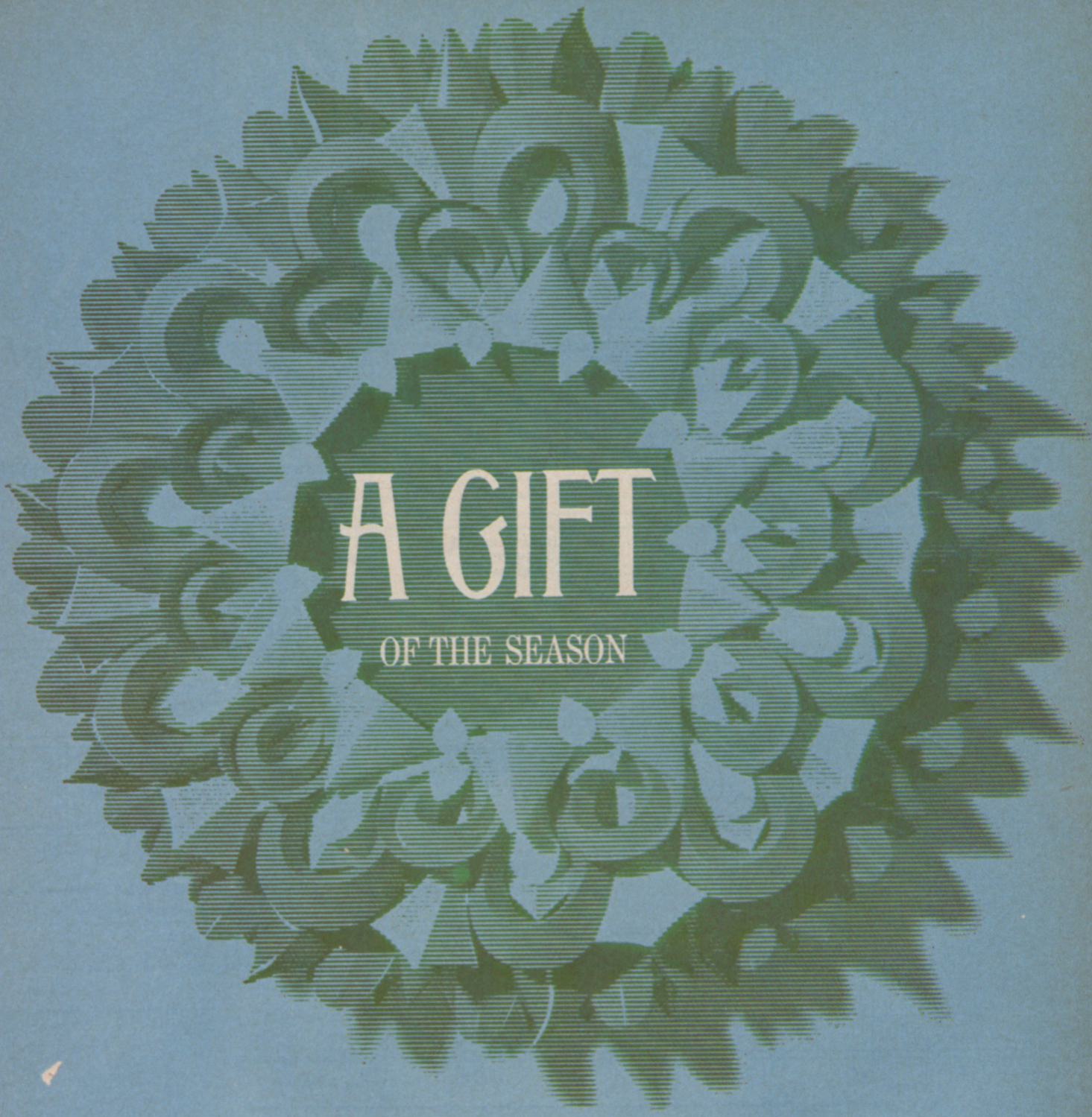
Nongrading is another innovation found in middle schools and junior high schools, but, like team teaching, it does not yet live up to its full promise. Continuous progress plans are an important goal for the middle school if every child is to have the advantages of his own success-oriented program. However, although middle-school staffs are using independent study plans, progress through units, frequent rephasing of students, special skills development laboratories, and programed instructional materials, they report that continuous progress is still only in the developmental stages. It is difficult to avoid an overemphasis on rate of progress rather than on differentiated paths to different goals for individual students.

The middle school is an eager customer for the newest educational media. Middle schools are frequently housed in new buildings, and new buildings are more likely to be open-concept in design and to have video and audio learning facilities and, occasionally, even closed-circuit television. All of these media can result in greater individualization in the student's program. They *can* be stimulating. They help prepare students to live in a world in which they can control technology or be controlled by it.

On the other hand, the expanded use of technology may result in a greater impersonality in the school program. Machines can only act like machines. If we want human-type beings, we must personalize education. If a middle school uses a laboratory to *individualize*, it must use a small group to *socialize* and an individual conference to *personalize* the meaning of school.

The middle-school movement is an exciting development, and part of the excitement grows out of its newness—the excitement of creativity is felt in these schools. But middle-school staffs are the first to admit that present middle schools are moving toward, not demonstrating, the patterns of education they espouse. This in itself is praiseworthy. •

Dr. Williams spoke at greater length on this subject at the 1968 annual convention of the National Association of Secondary School Principals (an NEA department).



YOUR PROFESSIONAL CALENDAR FOR JANUARY-JULY 1969

• **Please accept as an appropriate gift of the season this** professional calendar from the editors of *Today's Education.* Many of the special days and weeks of interest to school people are printed on the calendar, and there is room for you to personalize your calendar by noting other days and weeks of special interest to you.

Also included on the calendar is the annual convention of the NEA. There are dozens of other professional meetings—of NEA departments and affiliated groups—too numerous to print on the calendar. Those meetings of particular interest to *you*—and other items of interest to you in your school work—can be written in as you please. The list of organizational meetings for these months that appears on page 87 will help you make your selection.

NEA Research Division Memo 1968-7 and *Chases' Calendar of Annual Events* were used in the preparation of this calendar. Inclusion of an event in this list does not necessarily indicate endorsement by the NEA, nor does omission indicate disapproval.

JANUARY 19

MARCH OF DIMES MONTH

SUN.	MON.	TUES.	WED.	THURS.	FRI.	SAT.
			1 NEW YEAR'S DAY	2	3	4
5	6 EPIPHANY	7	8	9	10	11
12	13 STEPHEN FOSTER MEMORIAL DAY	14	15	16	17	18
19 LEE'S BIRTHDAY	20	21	22	23	24	25
26	27	28	29	30 FRANKLIN ROOSEVELT'S BIRTHDAY	31	

MAR

RED CROS

SUN.	MON.	TUES.	WE
2	3	4 PURIM	5
SAVE YOUR VISION WEEK			
9	10	11	12
GIRL SCOUT WEEK			
16	17 ST. PATRICK'S DAY	18	19
NATIONAL WILDLIFE WEEK			
23	24	25	26
CAMPFIRE GIRLS WEEK			
FUTURE HOMEMAKERS OF AMERICA WEE			
30 PALM SUNDAY	31		
HOLY WEEK			

CANCER CONTROL MONTH

SUN.	MON.	TUES.	WED.	THURS.	FRI.	SAT.
		1 APRIL FOOL'S DAY	2	3	4 GOOD FRIDAY	5
		HOLY WEEK	CONTINUED			
				PASSOVER		
6 EASTER SUNDAY	7	8	9	10	11	12
					TEACHERS IN POLITICS WEEKEND	
13 PAN AMERICAN WEEK AND DAY	14	15	16	17	18	19
20	21	22	23	24	25 ARBOR DAY (in many states)	26
NATIONAL LIBRARY WEEK						
27	28	29	30			

APRIL

69
FEBRUARY
AMERICAN HEART MONTH
SUN. MON. TUES. WED. THURS. FRI. SAT.
1 NATIONAL FREEDOM DAY
2 GROUNDHOG DAY
3 4 5 6 7 8
BOY SCOUT WEEK
NATIONAL CHILDREN'S DENTAL HEALTH WEEK
9 10 11 12 LINCOLN'S BIRTHDAY 13 14 VALENTINE'S DAY 15 SUSAN B. ANTHONY DAY
FUTURE FARMERS OF AMERICA WEEK
NEGRO HISTORY WEEK
16 17 18 19 ASH WEDNESDAY 20 21 22 WASHINGTON'S BIRTHDAY
BROTHERHOOD WEEK
23 24 25 26 27 28
RCH
S MONTH
ED. THURS. FRI. SAT.
1
6 7 8
13 14 15 IDES OF MARCH
20 SPRING BEGINS 21 22
27 28 29
SENIOR CITIZENS MONTH
SUN. MON. TUES. WED. THURS. FRI. SAT.
1 LAW DAY USA 2 3
4 HORACE MANN'S BIRTHDAY 5 6 7 8 9 10
NATIONAL MUSIC WEEK
BE KIND TO ANIMALS WEEK
11 MOTHER'S DAY 12 13 14 15 16 17 ARMED FORCES DAY
POLICE WEEK
18 19 20 21 22 23 SHAVUOT 24
25 26 27 28 29 30 MEMORIAL DAY 31
MAY

JUNE
SUN. MON. TUES. WED. THURS. FRI. SAT.
1 2 3 JEFFERSON DAVIS' BIRTHDAY 4 5 6 D-DAY IN EUROPE 7 FREEDOM OF PRESS DAY
8 9 10 11 12 13 14 FLAG DAY
NATIONAL FLAG WEEK
15 FATHER'S DAY 16 17 18 19 20 21 SUMMER BEGINS
22 23 24 25 26 27 28
SWIM FOR HEALTH WEEK
29 30
NEA CONVENTION
JULY
SUN. MON. TUES. WED. THURS. FRI. SAT.
1 BIRTHDAY OF U.S. STAMPS 2 3 4 INDEPENDENCE DAY 5
NEA CONVENTION CONTINUED
6 JOHN PAUL JONES' BIRTHDAY 7 8 9 10 11 12
13 14 BASTILLE DAY 15 16 17 18 19
20 21 22 23 24 BOLIVAR'S BIRTHDAY 25 26
27 28 29 30 31

PRESCHOOL EXPERIMENT IN APPALACHIA

Upper left: Patricia Hughes, the TV teacher, explains the aquarium. Upper right: She leads a song. Lower left: Linda O'Dell, assistant teacher, helps with a demonstration. Lower right: A teacher aide visits a home to explain a week's lessons.

• **"Billy Joe, put the kittens back** under the steps with their mother and get in here. It's almost time for school." Billy Joe drops his armful of calico kittens into their cardboard carton and scrambles up the unpainted steps to his mountain home. He goes inside and pulls the little table and chair his father has made for him over next to his mother's rocker. Then Billy Joe and his mother settle down to a half hour of TV watching, a half hour during which the two of them will see and hear about some things the mother may never have had a chance to learn about—and things Billy Joe might never have learned about either if it weren't for TV and a brand-new educational program.

Billy Joe is one of 150 youngsters living in mountainous West Virginia who are participating in an innovative early childhood education program this year. The program, which is being conducted by the Appalachia Educational Laboratory, is an attempt to find a means of providing three-, four-, and five-year olds living in isolated areas of Appalachia with the kind of stimulating preschool experiences that can mean the difference between success and failure for them in school and in the years to follow.

West Virginia educators have realized for some time that establishing a program of early childhood education is a necessary step toward upgrading education in the state and that the time to take that step is now. They have also realized, however, that for a number of reasons, a traditional kindergarten-type program may not be appropriate for the state's county-wide school systems.

These people close to the scene know that even if it were practical to bus tiny children over miles of mountain road to attend early childhood classes, it would be economically impractical. Bussing would be very expensive in itself, to say nothing of the cost of building schoolrooms to house the programs. To complicate matters, West Virginia, which has never had public kindergartens, has few home-grown kindergarten teachers. Added to this is the fact that the state is suffering from a serious teacher

shortage, and staffing an early childhood program would steal teachers from the existing school structure.

Although fully conscious of all the factors militating against early childhood education for the children of their state, leaders of the West Virginia Education Association were convinced that such a program would be heavy artillery in the war they are waging against poverty and ignorance. Studying the research findings of Benjamin Bloom and the results of experiments at George Peabody College and in the far-away little country of Israel which showed that early childhood education programs can raise the intelligence level (and the potential for success) of preschool children from 12 to 20 points increased their conviction.

Two years ago, the association took the problem to the Appalachia Educational Laboratory, one of 20 laboratories established over the country under Title IV of the Elementary and Secondary Education Act of 1965. The problem was made to order for the Laboratory, whose mission, according to its director, Benjamin E. Carmichael, is "to bring about educational development or change by using new ways of implementing educational processes."

As WVEA members and Laboratory personnel conferred—considering this means and that of providing early childhood education for West Virginia—one logical possibility emerged. In West Virginia, 90 percent of the homes have television. Why not take an about-face approach and use television to take early childhood education sessions to the children, instead of taking the children to the sessions? Very few reasons why not, it seemed, and many reasons why, and so this year 150 of the three-, four-, and five-year-olds in eight mountain counties are enrolled in the first year of an experimental three-year preschool program.

The program is much more than a 1968 revival of Ding Dong School, that much loved first TV alma mater of many of today's college set. It has a scientifically developed curriculum, and the half-hour daily TV presentations are supplemented by home visitation, parent education, weekly small-group experiences, and, for five-year-olds, a Head Start type of summer experience just before they start to regular school.

To develop the special curriculum, the Laboratory enlisted the cooperation of the College of Human Resources and Education of West Virginia University. The resulting curriculum, which was tailor-made for the children of Appalachia, involved not only extensive study of the literature in the field, but observation of 120 West Virginia children.

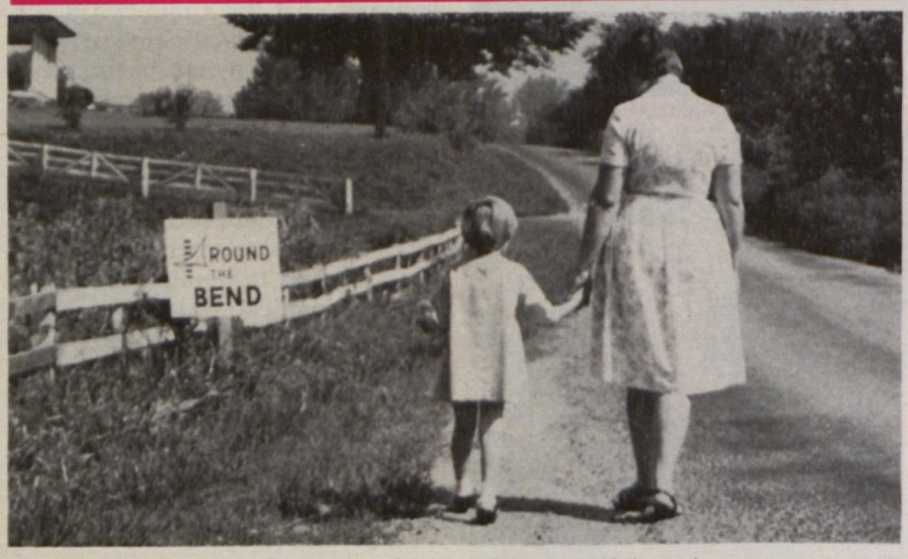
Curriculum developers took particular notice of the fact that although the children of Appalachia are deprived and need compensatory education, their deprivations and hence their educational needs are different from those of big city children, so that the same program would not be equally helpful to both groups.

City children often need to gain the security that comes from feeling that they are loved; they need to have experiences with pets and growing things. Billy Joe, on the other hand, has two loving parents and knows that they love him. He has his calico cats and, perhaps, some squealing piglets to observe and care for. However, he has never seen a tall building, an apartment house, a traffic cop, or a bus token. The Billy Joes of Appalachia and the Williams and Josephs of the ghetto need different early childhood experiences. The curriculum that West Virginia University has outlined contains elements adapted to the particular needs of the Billy Joes as well as those designed to lift the intelligence level of children in general.

The federally financed experimental program is being conducted in an eight-county area around Beckley, West Virginia. The televised parts of the program, which are broadcast over station WOAY-TV in Oak Hill, can, of course, be watched by any child in the area whose parents want him to, but official enrollees are 150 children who make up a representative sampling of the preschool population of the area. These children were selected from a large number whose parents volunteered to cooperate after the idea for the program was publicized.

During the summer, a staff of eight residents of the area, after special training under the direction of the Laboratory, made a survey of the area to identify the children for the sample, with no regard to economic, social, or educational environment.

This same staff has a key role to play in the actual program. Staff members serve as home visitors, whose primary job is to encourage mothers to stimulate their children to learn. During the school year, one of these workers visits every participating home once a week, to give the mothers information that will help them to help their children get the most out of the program. The visitor brings printed material explaining about the lessons for the



In the filmed introduction to the TV sessions, Mother and child go "round the bend" to the mobile kindergarten.

coming week. If a mother is illiterate, the visitor takes time for step-by-step explanations.

During the school year, the children's experiences are of two kinds —the daily half hour on TV and a weekly session in a wonderful kindergarten on wheels. Patricia Hughes, an early childhood specialist who formerly taught the Pittsburgh WQED kindergarten, is the teacher of the videotaped TV lessons, which are prepared at the Appalachia Educational Laboratory. Her assistant is a local teacher, Linda O'Dell. The lessons, based on curriculum studies by West Virginia University, emphasize language development, development in cognitive skills and knowledge, and social and emotional growth.

Material covered in the weekly sessions in the mobile classroom is closely coordinated with the televised lessons. If, for example, the children have had a TV lesson about musical instruments, they get to see —perhaps even to try—the instruments during their two hours in the classroom. The 8′ x 22′ mobile classroom also provides the opportunity for group experiences, since it parks at spots that are "round the bend" —one bend or another—from several families. Sometimes a dozen or more children participate in a session. Shirley Cook, a Beckley teacher, and a teacher aide conduct these sessions. They also maneuver the huge truck over mountain roads.

Both Laboratory personnel and members of WVEA are enthusiastic about the promise of the experiment. Phares E. Reeder, executive secretary of WVEA, believes that this approach can make preschool education available to all children even if federal funding should not be available after the three-year trial project is over. He suggests that a similar program could be continued under county school systems, financed by suitable local commercial interests—bakeries and dairies, for instance.

Although the Laboratory staff looks ahead to the day when ETV will be available in Appalachia, Mr. Reeder is of the opinion that commercial TV may be the better means of reaching the target families. "Even if ETV becomes available," he says, "it will be years before the majority of our rural families have sets equipped to receive it. Besides, I think mothers will be more likely to tune in to the station that carries their favorite soap operas than to the more formidable ETV."

Roy W. Alford, coordinator of early childhood education at the Laboratory, has high hopes of what the experiment will accomplish. "If our about-face approach works as well as we anticipate it will," he says, "economic conditions or isolation will not force any West Virginia child to miss out on the preschool experience he needs so badly."—A.C.H.

Thoreau, who has no superior in American literature as an idealist, tells in *Walden* of a "strolling Indian" who "went to sell baskets at the house of a well known lawyer in my neighborhood." When he was told, "No, we do not want any" the Indian exclaimed, "What, do you mean to starve us?" Thoreau reacts with the comment: "Thinking that when he made the baskets, he would have done his part, . . he had not discovered that it was necessary for him to make it worth the other's while to buy them, or at least make him think that it was so or to make something else which it would be worth his while to buy." So it is with many idealists. They believe they have done their part when they have conceived their ideals.

The world today is in desperate need of many persons with high spirits, high integrity, and high values who will spend intelligent effort in becoming winners. For idealists to become winners and still be idealists they must become more cooperative without becoming conformists, more courageous without becoming agitators, more joyful without becoming Pollyannas, more tolerant without losing their willingness to stand for their point-of-view, and more concerned with procedure without forgetting their concern for substance.

—J. A. Battle, dean, College of Education, University of South Florida, Tampa.

LIGHT TOUCH

Now There's a Teacher!

ELIZABETH L. DALTON, *chairman, Education Department—Undergraduate, University of Chattanooga, Tennessee.*

• **Mr. Barker made it a practice to** protect his faculty during their teaching periods. He also made it a practice to protect them against outside criticism. So I was startled one morning when he motioned for me to come from the typewriting room. Has something happened to one of my children? I wondered. Is my house on fire?

As I maneuvered myself through the maze of desks and approached the door, I was even more startled to see a man and a woman with my principal. Somewhat sheepishly, it seemed to me, Mr. Barker presented Mr. and Mrs. Humphreys when I stepped into the corridor. "These are Jim's parents," he explained, "and they have come to see you about Jim's typing grade."

Jim's typing grade—yes, he made F, I easily remembered. I could see Jim in my mind's eye. Short and stocky, a standout guard on our football team, Jim simply could not manipulate his fingers on a keyboard. How I had labored with him. We needed him on our football team. Further, I was determined that he learn to control those short, stocky fingers that matched so well that short, stocky body, which he controlled so handily.

I looked at Jim's parents. Worried, concerned, willing to leave work to defend their son, Mr. and Mrs. Humphreys stood there, demanding to know why I had failed Jim in typing.

I looked at my principal. Deadpan, detached from the muddle, Mr. Barker stood there, waiting. What's your role in this out-of-the-way interruption? I couldn't help but wonder. There must be some significance, some hidden meaning, I told myself. Is it football eligibility? Of course not; Mr. Barker was hardly the man to sell his value system short.

At any rate, Jim's parents were doing all the talking. Both were filled with distress. Anyone, just anyone can learn to type, they said over and over and over again. With all the patience I could muster, I broke in occasionally with what seemed to me a most lucid explanation of Jim's unhappy adventure with the typewriter. I accented the positive: "Jim tried, you know; he's conscientious and cooperative."

Suddenly, almost as if by prearrangement, Mr. and Mrs. Humphreys chorused, "Now Jim's other teachers. . . ." It was soon evident that Jim's parents were well-satisfied with his other teachers. His English teacher, his history teacher, both were helpful. But the bookkeeping teacher! What a great teacher they were making *her* out to be.

Mr. and Mrs. Humphreys were so extravagantly enthusiastic about this superbly helpful teacher that they brooked no interruption. I glanced in Mr. Barker's direction, but he was still as deadpan as when he first motioned me from the typewriting room.

In bookkeeping class, the Humphreys went on, Jim had been given individual help every single day. Bookkeeping was hard for Jim, but this teacher made it easy; *she* knew how to teach. She didn't go around failing students. She was patient and willing to go the second mile.

The sudden silence of 50 typewriters brought the four of us back to the reality of bells about to ring. Before I could volunteer a word, Mrs. Humphreys wistfully suggested, "My husband and I wish you were like the bookkeeping teacher."

I didn't smile, and neither did Mr. Barker, as I gently explained, "I *am* Jim's bookkeeping teacher."

Dr. Dalton's story was a prizewinner in the 1967 NEA Journal-Reader's Digest Foundation Teachers' Writing Competition.

LOCAL ASSOCIATION OF THE MONTH

The Des Moines Education Association

AFFILIATED WITH NEA: 1921
PRESENT MEMBERSHIP: 1,700 members
DUES: $56-$70 (unified)
OFFICERS: President, three vice-presidents, treasurer, secretary, parliamentarian, past president ex officio
STAFF: Executive director, office manager, one clerk
HEADQUARTERS: 2747 Douglas, Des Moines, Iowa 50310

Using State and National Services

• **In seeking to win a representation** election, the right to negotiate, and a new salary schedule, the Des Moines Education Association used staff services from NEA and from the Iowa State Education Association very effectively.

Help in the form of research data to support the salary schedule, teams of staff members from state and national associations to lend a hand in the representation election, salary consultants from NEA to assist in framing the schedule, and the skill of an NEA negotiator, put the local association in a relatively secure position with Des Moines teachers despite the existence of a competing union.

Iowa statutes have so far prevented the association from fully accomplishing its goals: Because the state attorney-general has ruled that school boards may not do anything that the Iowa statutes do not specifically empower them to do, the Des Moines Board of Education refuses to enter into complete negotiation on the grounds that so doing would be illegal. The superintendent of schools meets with a representation committee made up of four members of DMEA and one member from the union. The board, however, does not authorize the superintendent to negotiate on its behalf, and therefore does not feel bound to accept what the committee and the superintendent recommend.

To nudge the board out of its comfortable refuge in legalism, the association is working with the ISEA to secure passage of professional negotiation legislation. A recent opinion of a district court in Iowa indicates that public employees can negotiate collectively if they wish to do so. DMEA and ISEA will continue to press for mandatory professional negotiation legislation in the 1969 session of the Iowa General Assembly.

This association in the capital city recognizes its need for the strong legislative leadership of the state association. In a symbiotic relationship ISEA, in turn, draws upon DMEA for many of its leaders and committee members. For example, ISEA pays half of the salary of DMEA's executive director, involves him in its staff meetings, and calls on him to fill general speaking engagements.

In addition to working for a PN law, the two associations seek greater state support for Iowa schools, an improved teacher retirement system, and legislation allowing the Des Moines Board of Education and others to deduct for teachers their association dues, contributions to the United Fund, and payments to the Credit Union, thus providing a service which teachers in many other communities across the nation now take for granted.

This relationship between ISEA and DMEA minimizes the rivalry which sometimes exists between teachers in the largest city and those in the rest of the state. In general, urban associations in Iowa move into an important position in the state association. ISEA in turn is regionalizing and specializing its field service the better to serve the urban associations as well as its many smaller local affiliates.

Urban problems exist in Des Moines somewhat like those in other cities. Six percent of the population is black. Social protest and unrest have their effect on some of the schools. ISEA works with the DMEA executive director in a workshop for association leaders and encourages leaders from other local associations to participate. At a recent state staff meeting, the DMEA executive director proposed a task force on urban problems. The ISEA responded, and has planned a series of workshops to meet this issue.

One of the strong points of the DMEA is its public relations program, which has developed over several years. The association relates well to the press—its scrapbook of current clippings is two inches thick. It makes use of news stories from the NEA Division of Press, Radio, and Television Relations by giving them a local angle. During a recent communications workshop for its members, DMEA put on two half-hour programs over the local education TV channel. Periodically throughout the year, the association works with public relations experts on the ISEA staff in developing public service programs for the local radio and TV facilities.

DMEA works closely with the community. It actively supports the United Fund. It has assumed the leadership in support of bond issues; it is not afraid to take stands, sometimes unpopular, on issues of civil rights. The association, therefore, is well-known in the city. One of the association goals is to improve its identification with civic affairs. It seeks, for instance, not merely to receive recognition for supporting the United Fund but

also to have a DMEA representative on the controlling committee.

Five years ago, in the battle for its survival as a force in Des Moines education, DMEA had a major confrontation with the then superintendent of schools. The association won its battle, and relationships with the superintendency have improved. The Representation Committee meets weekly with the present superintendent. The association's Policy Review Committee, charged with keeping personnel policies up-to-date, is proud of a new statement on discipline, which was jointly worked out with school administration to meet a pressing need.

Leaders of DMEA are quick to point out that the life of an urban association is not one of ease, and problems are always present. Even with a new salary schedule, DMEA must cope with the unrest of an increasing number of militant young teachers, men and women, who want action for rapid improvement of beginning salaries. Furthermore, the association must not let the young militants drown out the more conservative voice of an older generation, largely Iowa-born, to whom teacher militancy is perhaps a strange new world.

The point of the young teachers is well taken. Most of the young married men moonlight. One commented: "You can teach five years in Des Moines, then go to work in private industry at the bottom of their ladder, and earn $500 a year more." Part of the association's problem arises from the attrition that has taken place in the middle-age group, a phenomenon which testifies to the inadequacy of former salary scales.

The DMEA Salary Committee recognizes this need and seeks to secure large increments at the third, fourth, and fifth steps of the schedule. It is also requesting increased life insurance coverage on members and more adequate hospitalization insurance.

The association also is seeking ways to enlist and bring into active participation about 300 new teachers each year. This year it has developed and given to every teacher a comprehensive yearbook which explains association structure and many of the school policies.

As negotiation develops, DMEA will examine its all-inclusive structure to discover ways of assuring an effective channel for all the voices in the profession. To assist in this, it will call on the evaluation service of NEA-ISEA.

The association's membership goal this year is 1,800 unified members paying dues that range from $56 to $70 per member. Because the school administrative offices are located at 1800 Grand, it could be that these unified members will be known as the Grand 1800. In 1967-68, the first year of unification, the association increased its membership over the previous year. It is working harder this year to sustain that record. It will have to seek active involvement with the faculties of certain problem schools and develop sound techniques for communicating with them.

The association expects problems, but it also expects to grow in the process of solving them. Leaders are very much aware of the strength of a united profession and they do not hesitate to ask for the services it can provide. They are particularly aware of NEA this year when DMEA is providing NEA with its president-elect, George D. Fischer; an NEA state director, James A. Harris; a member of the National Commission on Teacher Education and Professional Standards, Frank L. Hildreth; and the secretary of the NEA Association of Classroom Teachers, Ruth I. Foster. The fact that so much leadership has risen to the national level from one association testifies that DMEA, despite its unsolved problems, is a vital professional group.

—John H. Starie, *director, NEA Division of Affiliates and Membership.*

The intellectual liberation from prejudice comes from childhood experience. If it apparently develops at a later age through pure reason rather than emotional experience, it will never be totally free from the fear which is at the base of all prejudice. It is natural to fear the unknown; man is made that way. Such fear will not develop if youths experience at an early age the easy, unselfconscious communication of childhood with contemporaries of other races. At school a white child can learn that his fellow black students are no stronger or weaker, no smarter or duller, no faster, no slower than he or his other white friends. Instead of fear, he will build a bond with another human being which is based on sharing all the heartaches, hopes, and special joys peculiar to childhood.

—Jo Brosious, *editor,* The Westport [Conn.] News.

Montana Education

Preschool Programs

• **"I would never have believed that these four-year-olds** would respond so dramatically to the academics we taught them. I can see now that for many children kindergarten may be too late!" This comment came from one of the teachers who worked with a group of children in our ESEA academically oriented pre-pilot nursery program held for eight weeks in the summer.

Many other school districts across the state used their ESEA funds for instructing educationally deprived children of kindergarten age. But, because Bozeman has held highly successful locally supported kindergartens for the past 29 years, we used our funds to explore the many-faceted potentials of prekindergarten children. Our major goal was to find clues to some of the more deep-seated problems that obstruct later learning success for so many children.

During the planning period for this program, it became very apparent that the typical nursery school program is aimed only toward developing the child emotionally and socially. We found few developmental programs that were specifically designed to influence a child's *intellectual* growth. Most of the mind-expanding activities were left purely to chance.

This laissez-faire attitude seems to be a carry-over from Dewey's philosophy, which has been interpreted as defending the notion that children will automatically express "interests" when they are *ready* to learn something. Recent studies, however, rebut this long-accepted principle.

In his book, *Education and Ecstasy*, George B. Leonard explains that too many teachers of today still wait for the child to show signs of interest before they give any instruction, because they woefully underrate his capacity for learning. Leonard writes, "These good-hearted doubters are still around, with stacks of studies to show us precisely what children *cannot* do until this age or that age. Their studies become worthless when children are placed in learning environments designed to let them crash through the ceilings erected by the past."

An abundance of data is being accumulated today that supports the theory of expanding the limits of intelligence. Benjamin Bloom of the University of Chicago concluded in his significant study, *Stability and Change in Human Characteristics*, that 50% of all growth in human intelligence takes place between birth and age 4, 30% between ages 4 and 8, and 20% between 8 and 17.

This means that four-fifths of a child's intellectual development is complete before he starts grade 3. And more important, half of this intellectual growth has taken place before the school ever sees him.

Jerome Bruner, in his book *The Process of Education*, says, "Experience over the past decades points to the fact that our schools may be wasting precious years by postponing the teaching of many important subjects on the ground that they are too difficult.... The foundations of any subject may be taught to anybody at any age in some form."

These bold hypotheses were the foundations on which the Bozeman summer program functioned. So far, we have found little evidence to contradict them.

The dramatic successes of our program were only the prelude to the more extensive study now under way in our year-long experimental nursery school. Financed by tuition, the program is self-supporting. In the morning, 15 children from three-and-a-half to four years old receive instruction; in the afternoon, 15 who are four to four-and-a-half attend.

To facilitate reaching our goal of expanding the child's intelligence, we outlined the program's procedures in considerable detail. We will use many conventional tools to provide extensive training in the primary mental abilities of verbal meaning, visual and spacial perception, reasoning, quantitative thinking, word fluency, memory, and motor coordination.

While support for preschool programs of this nature has been increasing, there has been too little practical research. Hence, a team of elementary counselors from the Bozeman Educational Research Center will thoroughly test our innovative experiment. They will assess qualitative as well as quantitative changes in the children. Over a three-year period, they will measure the significant differences among various control groups in the areas of intelligence, readiness, achievement, and social development.

Our premise is that we can no longer legitimately regard any preschool program as being day care only, or consider that it merely presents a good opportunity to teach children how to get along with one another. Preschool educational programs, if properly presented, may soon receive education's highest priority because of the impact this instruction may have on the intellectual development of our children.

—**Milton K. Negus,** *superintendent, Bozeman Public Schools.*

This special section of the Montana edition of TODAY'S EDUCATION was prepared in cooperation with Andy R. Oja, editor of *Montana Education*. The Montana edition is being mailed to the entire MEA-NEA unified membership.

The Great Falls Kindergartens

• **Great Falls, Montana, wants to give every child full** opportunity for success in school. Not only is the kindergarten curriculum constantly being evaluated and strengthened, but the disadvantaged child receives further help through Day Care, Head Start, and Head Start Follow Through programs. These are being correlated with the kindergarten curriculum.

While the Great Falls kindergartens do not strive to teach the child to read and write before first grade, they do provide a strong readiness program in reading, mathematics, science and conservation, social studies, health and safety, and manuscript writing. Creativity is encouraged through art and music; and physical fitness, through physical education. Thus the kindergartens offer a multitude of experiences to excite the child's mind, to lead him on the road to discover his world, and to answer his frequent "Why?"

In language arts, through use of a language kit and, later, a reading readiness book, we emphasize auditory training that stresses the development of thoughtful listening—so important throughout an individual's life. The foundation for a phonics program is laid as the child listens for similarities or differences in words. Games and activities develop visual discrimination and training in left-to-right eye movement. Building informational background, enriching vocabulary, and developing thought processes—all needed for later reading comprehension—are never overlooked.

As each child is developing physically, mentally, socially, and emotionally, we watch for any weakness in his growth pattern in order to undertake any necessary correction before he risks failure in the more formal curriculum. The teacher's observation and judgment are of first consideration; however, we also use other measurements, such as readiness tests.

Early detection of visual perception disability in children is a goal of the Great Falls system. At the present time, all kindergartens in the city use the *Frostig Development Program in Visual Perception.* Our decision to try this resulted from a workshop conducted here two years ago by Dr. Marianne Frostig. Following this, one of our remedial reading teachers observed and studied in the Frostig School of Educational Therapy in Los Angeles. Upon her return, six of our kindergartens initiated a pilot program, which proved so successful that it is now used city-wide.

If a child appears to have a visual perception problem, he may be tested and given remediation through additional Frostig materials and special exercises and activities. Such materials as balance beams and full-length mirrors placed in every kindergarten room have proven helpful for children with special problems.

At the kindergarten level, we use only the Frostig beginning workbook. But we first give every child preparatory training, most of which is accomplished by activities already in the kindergarten curriculum.

It is too early as yet to evaluate the results of city-wide use of the Frostig method, but the reactions of teachers at the kindergarten level are positive. Teachers say, "Children approach test situations with a greater feeling of confidence. They learn to listen and follow directions. They learn to speak in complete sentences and have developed a greater language ability."

From time to time in Great Falls, as in other communities, questions have been raised about the need for kindergartens. As a result, some three years ago, Stephen A. Birch, then school board chairman, instigated a survey of the efficacy of kindergartens.

To quote from the survey: "The kindergarten program is an integral part of the Great Falls public school system. Because the program is publicly sponsored, it gives every child in the community an opportunity to participate in educational activities which stimulate his social and academic growth."

Teacher comments strongly supported the conclusions of the survey. Said one teacher, "Kindergarten children are ready to sit and listen to directions when they come to first grade." Said another, "I am able to handle more children in a first grade class if they have had kindergarten training."

Minnie Perrin Berson in her book, *Kindergarten: Your Child's Big Step,* stated, "Kindergarten is the foundation of education. Communities that offer an excellent kindergarten experience provide an excellent education at all levels."

This Great Falls believes and seeks to carry out in its entire educational program.

—**K. Louise Bardwell,** *elementary consultant for kindergarten through Grade 2, Great Falls Public Schools.*

Finance and Legislation

• **As the time for the convening of the forty-first** Legislative Assembly draws near, financing of public school education in Montana presents serious problems to every Montana school board member, administrator, teacher, and parent. All these persons, responsible for and concerned about the quality of educational opportunity, face the danger that inadequate financing may cause sharp deterioration of the educational program available to Montana children.

In the face of increasing resistance to higher taxes at all levels of government, schools are under financial pressures caused by the rising costs of all goods and services, by growing enrollments, and by the demand for broadened and improved programs. And the opti-

mistic outlook of two years ago for greater federal assistance to the states has been stifled by the trend toward federal austerity. Whether we like it or not, satisfactory solutions no longer lie within the ability of the local community; they must instead be sought in the legislative halls in Helena. Unless teachers, administrators, school boards, and parents join hands to develop understanding and support, there is little chance for adoption of adequate measures.

The financial woes of our public schools rest in two basic problems, both requiring legislation:

1. Present Foundation Program schedules are unrealistic in terms of actual school expenditures.
2. Support from state sources is inadequate.

As a result, schools are forced to seek both more and more budgeting authority and the funds with which to meet these added expenses from annually voted district levies, with the ever-present danger of taxpayer rejection. Consequently, it is virtually impossible for boards, administrators, and teachers to develop with assurance long-term plans for improvements.

A glance at a few of the statistics involved indicates the magnitude of the problem. In spite of increases granted in every legislative session since 1949, and in spite of the substantial 15% increase in permissive budgeting adopted by the 1967 Legislative Assembly, school boards had to resort to unprecedented additional voted levies in 1968-69 operating budgets. Statewide, voted levies supplied approximately 13% of the school general fund budget total, with some districts relying as much as 40% on voted levies, and with 25-30% reliance being quite frequent. When so large a proportion of the budget depends from year to year on the whims of the taxpayers, it takes little imagination to recognize how precarious are teacher salaries or any plans for quality education.

The total Foundation Program for all schools, which establishes the ceiling toward which the state will contribute, is equal to only 70% of the general fund budget total. Not only is nearly all revenue above the Foundation Program derived from local property taxes, but within the Foundation Program itself over one-half of the funds in 1968-69 will come from property taxes collected at the county level.

Of total general fund budgets exceeding $100 million, state equalization is expected to provide for this year only $23.5 million, and earnings from permanent school lands and funds, approximately $9.5 million. (With the passing of the Bell Creek oil lease boom, we can expect this latter fund to decline in the future by perhaps $3 to $4 million per year.)

The level of school budgeting available to boards of trustees and the degree of support the state provides will determine to a large extent the quality of our children's education. On these factors depend our ability to provide salaries adequate to attract and retain good teachers in Montana, to plan for improving and extending the curriculum, and to improve the quality of instruction. Thus every teacher, administrator, and school trustee has a stake in the outcome of school legislation in 1969.

At the time of this writing, the MEA was engaged in a series of legislative discussion meetings (which reached every legislative district in the state) and made plans to contact an estimated two-thirds of all legislative candidates prior to the general election. It now remains for every MEA member to accept the responsibility of maintaining informed, responsible, and courteous contact with the successful candidates before and after their arrival in Helena.

Only through the cooperation of teachers, administrators, school boards, and concerned parents will there be reasonable hope for success in influencing legislative action.

—**Lloyd Markell,** *director of Research, Montana Education Association.*

Professional Negotiation in Montana

What is professional negotiation?

It is a method of using to the fullest the knowledge, abilities, and professional competencies of certificated school personnel in developing policies that affect the school program. It is a process by which teachers and other professional employees exert formal and deliberate influence on school board policy. And, assuredly, teachers can be expected to work harder to make a success of school policies that professional negotiation gives them a voice in developing.

Why is it necessary to have our negotiation procedure in written form?

To follow precedent, if for no other reason. Our sick leave policies, salary policies, and all other personnel policies have been formalized and are in written form. Why make an exception in the case of provisions for smooth and efficient negotiation? And, of course, our major reasons for putting school policies in written form have been to: (1) facilitate an accurate and consistent interpretation of policy in actual practice, and (2) assure a continuance of each policy in the event of staff turnover, administrative change, or changes in school board membership.

How many local written procedural negotiation agreements have been adopted in Montana?

A confirmed list of school districts that have adopted written agreements, as of October 30, include Powell County High School, Libby, Lambert, and Whitehall.

What is the function of a state negotiation law in guaranteeing the right of educators to have a voice in policy making?

A mandatory type of statute on professional negotiation for educators will guarantee the teachers negotiation rights if they elect to exercise such rights.

Law or no law, each local unit will have to request that the school board adopt a written procedural agreement for negotiation. One of the main functions of the state law is to assure the local unit success when it requests such a local agreement.

What is the possibility of a professional negotiation statute for Montana?

The 1968 MEA Delegate Assembly recommended: "If the need arises as exhibited by the lack of a number of written agreements consummated in the State between this Delegate Assembly and the legislative session in January 1969, the PR&R Committee be directed to propose a state statute to the Legislative Committee before the session convenes." On September 18, representatives of the Montana Education Association, Department of Public Instruction, Association of Classroom Teachers, Montana Association of Secondary School Principals, Montana Department of Elementary School Principals, Montana Association of School Administrators, Montana School Boards Association, and the American Federation of Teachers considered a tentative draft of a professional negotiation bill from which a negotiation statute might be developed if voluntary local agreements are not reached.

What stand has the Montana School Boards Association taken in regard to professional negotiation?

On October 11 during the Montana School Boards Association meeting, the association took a forward step in passing a resolution with only a few dissenting votes, that the MSBA recommend to its membership "that they adopt the MEA-proposed professional policies agreements in such degree as is mutually satisfactory to local boards and MEA Units."

What are the issues in the unrest of educators?

Contrary to the beliefs of many persons, salaries and fringe benefits are not the sole issues. Other points of dispute that overshadow the compensation issue include: (1) a voice for teachers in policy making, (2) reduction in class size, (3) the need for teacher aides or paraprofessionals, (4) greater teacher participation in curriculum and textbook selection, (5) the need for special education facilities, (6) the need for expanded building facilities to eliminate double-shifts.

—**Owen Nelson,** *director of Teacher Special Services, Montana Education Association.*

Some Patterns in Innovation

• **In describing innovative programs in Montana** schools, I cannot refrain from mentioning the excitement of an elementary school class on a summer geology field trip, or telling of the sparkle in the eyes of a migrant worker's child as he watched Indians thundering to battle in an Indian-sponsored reenactment of Custer's Last Stand, or trying to transmit a feeling of accomplishment shown by a mentally retarded child as he demonstrated how to use a camera. And I would be unfair if I failed to state that no innovative programs emerge without extra conferences, meetings, and workshops. Indeed, it would be impossible to account for how much the extras given by educators here and there have contributed to the realization of the goals of these programs.

Faced with the task of developing innovations, Montana's educators seem to prefer to take time to plan carefully. For example, 73% of Fiscal Year 1966 projects under Title III of ESEA were planning projects.

Now we are building our schools differently; we are rearranging our time schedules; we are enlarging our school libraries and making them more complex. At an increasing rate, we are implementing special education, driver training, and independent study programs. We continue to plan programs for the disadvantaged. In so doing, local groups have moved from the viewpoint that skill in reading is the most common need to the concept that language development is an even more basic need. The interest of planners in working out vocational education and preschool programs reflects a growing public concern.

From the office of Superintendent of Public Instruction Harriet Miller come programs based on a service concept. Project Talent is a constant search for students of limited resource and unusual ability who need to be encouraged to enter advanced educational programs. Mobile in-service training laboratories help state supervisors keep science and reading teachers informed of new programs, methods, and materials. The organization of state-administered ESEA Title II programs offers professional book selection services to all schools, making possible a massive upgrading of their libraries.

In Fiscal Year 1968, Montana's teacher educators joined public school representatives and state supervisors to discuss the improvement or development of preservice programs for teachers of English, foreign language, family life education, and Indian students. A special citizens' committee met with state supervisors to explore ways of building and disseminating programs in consumer education.

The Northwest Regional Educational Laboratory and the Rocky Mountain Regional Educational Laboratory are involving greater numbers of Montana educators each year in development, field test, and program activities. "Designing Education for the Future," an eight-state consortium, is developing planning perspectives for citizen and schoolman alike.

Of special import to innovation is the appointment of a state advisory committee for Title III of ESEA.

Finally, one should consider the setting for these educational changes. The land of the Big Sky is vast. It's as far from Troy (on the west) to Plentywood (on the east) as it is from Detroit to New York City. And yet if all the people inhabiting the approximately 147,000 square miles of Montana were to move to one

location, the city so formed would be less populous than Columbus, Ohio.

Within the state's boundaries are 705 common school districts, 629 of them operating. Two hundred forty-two of these districts contain one one-room elementary school. We have 338 additional one-teacher elementary schools, 113 two-teacher elementary schools, and 295 elementary schools with three or more teachers. Our high school districts number 170. There are seven Indian reservations.

People here are close to their schools. When change is involved, so are they.

—**Phillip A. Ward, Jr.,** *director, Division of Instructional Services, State Department of Public Instruction.*

Northwest Regional Educational Lab

• **Students at the four high schools in Chouteau** County, Montana, are using exciting new self-instructional systems of learning.

• First and second graders in the two-room rural school in Coffee Creek are watching their math lessons on closed circuit television.

• The 200 Indian children at Rocky Boy Elementary School are involved in pilot testing Individually Prescribed Instruction (IPI) in mathematics.

• Nearly 500 Montana teachers and administrators from 59 school districts began the school year this fall with new classroom capabilities.

• Faculty members at Northern Montana College are taking part in a nationwide study of attempts to improve rural education by sharing services among districts.

• Five Montana colleges and universities, along with the State Department of Public Instruction, are involved in a regional project to develop a model education program to prepare elementary school teachers.

These Montana activities to provide the best possible education for children in the state are the vanguard of a monumental cooperative effort being coordinated by the Northwest Regional Educational Laboratory (NWREL). A nonprofit organization with administrative offices in Portland, Oregon, the Laboratory is working with educational, governmental, and community agencies to speed the translation of new research and technology into better classroom practices. The Laboratory concentrates on the development of new, improved products for use in the region's schools.

Working with the Laboratory are 103 member institutions in the state—the State Department of Public Instruction, the Montana Education Association, 7 colleges and universities, 8 county school districts, 73 local school districts, 6 private schools, and 7 other organizations in Montana.

The various activities resulted from an extensive study of educational needs in Montana and four other northwest states. As part of this study, hundreds of Montana teachers listed "barriers" that they felt hindered their teaching effectiveness.

Guided by the assessment of regional needs, the Laboratory's 24-member Board of Directors established major improvement programs. One of these is aimed at improving instruction in small schools. Emphasis is on the development of multimedia self-instructional systems of learning to broaden and enrich the curriculum. These systems use slides, films, tapes, and programed materials to teach the various concepts in a subject. Since the systems are self-instructional, the teacher need only supervise. The student can proceed as rapidly as he pleases.

The first four systems—in speech, welding, plastics, and electricity-electronics—were tested last year in Chouteau County's four high schools. During the current year, systems in physical science, advanced and supplementary mathematics, and beginning Spanish are being added at the schools.

When the self-instructional systems are ready, the schools will become centers where the systems' use can be demonstrated to Montana school administrators. These new systems of learning will make it possible for small schools in the state to offer courses previously unavailable in rural areas.

Through the cooperation of NWREL, the State Department of Public Instruction, and Fergus County Schools, Patterns in Arithmetic—a new elementary mathematics program—is being implemented and evaluated in a rural, isolated two-room school. The program includes two 15-minute televised lessons each week and pupil exercises for follow-up work.

The University of Wisconsin's Research and Development Center is developing the lessons, which are being presented to a half-dozen first and second graders at Coffee Creek, Montana, on a television monitor from videotape recordings at the school. Project Director Kermit Cole, of the State Department of Public Instruction, is evaluating the program for possible further use in the state's rural one-room schools.

IPI, a second new elementary mathematics program, was installed this year at the Rocky Boy School near Havre. The students are taking part in pilot testing this individualized program, which the University of Pittsburgh and the Philadelphia-based Research for Better Schools are developing and evaluating. NWREL is coordinating the pilot testing in Northwest schools.

In another major program, NWREL is developing instructional materials, procedures, and systems to give teachers new classroom capabilities.

All these efforts demonstrate Montana's desire to improve the schools. NWREL is dedicated to keeping this cooperative involvement alive to make possible a meaningful educational program that will enable each Montana child to realize his full potential.

—**Jerry D. Kirkpatrick,** *Communications Division, Northwest Regional Educational Laboratory, Portland, Oregon.*

Flexibility in Montana

In MISSOULA

SHELBY BEWLEY, *superintendent, Missoula (Montana) County High School.*

• **Bill, a recent victim of multiple sclerosis, is study**ing to be a computer coder. He cannot use his hands well enough to manipulate a key punch, typewriter, or other office machine, but he has the mental ability to memorize the keyboards and understand their application to the computer. His teacher works with him to make the task easier.

Ed, who had completed seven years of college when he enrolled in career pilot training, had always wanted to become a commercial pilot and finally decided to do just that.

Before Marie could enroll in a practical nursing course, she had to pass the General Educational Development Tests, but last October she passed the state board examination to qualify as a licensed practical nurse.

When Don, a Blackfoot Indian, started to take heavy equipment training, he had never held a job, although he was 40 years old. His lack of general education still handicaps him, but last summer he was employed on a road construction job. At present he is enrolled for a second year of heavy equipment training.

Bill, Ed, Marie, and Don have all been students at Missoula Technical Center, a new vocational school where flexibility is the key word and where people—their problems, personality, and potential—are the prime concern.

Montanans have long treasured the privacy of the remote regions of their state and have regarded as invaders the forest-product industries that are now being attracted to the area by readily available water and timber. Resistance to this "invasion" has made Montanans slow to recognize the need for post-high school vocational training.

The need has existed, however, and a few Montanans, noting that the new industries entering the state were having to import skilled labor, started urging Montana to train its own youth in needed skills. The passage of the 1963 Vocational Education Act made it feasible for the state to do what they asked.

The Act had special significance for Montana because, by providing federal funds and making it possible to construct student dormitories, it made the area vocational school concept feasible in the state. The community and junior college movement has never really developed in the state because of scarcity of money and the limited, widely scattered population.

The state is developing a plan to permit designation of vocational-technical education centers. In 1967, the Montana Legislature appropriated money specifically for vocational-technical education. Montana had joined the industrialized twentieth century.

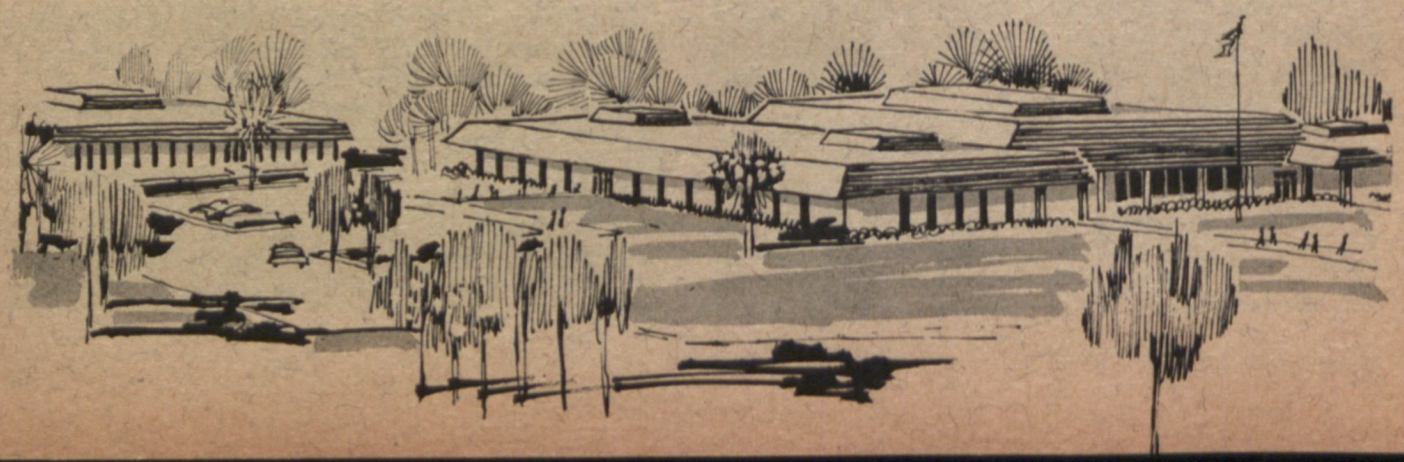
The Missoula Technical Center, which opened in a rented building in the fall of 1967, was the second such institute to be designated by the state board of education. Voters of Missoula County, realizing that the opportunity for vocational and technical education was a necessity if many County residents were to "make a living as well as a life," passed a $450,000 special mill levy to provide matching funds for the construction of a 1,000-student school.

Flexibility is the word that has characterized both the architectural and the curricular planning for the Center. The four buildings of the new campus, now being completed, are designed to permit rearrangement of classrooms and facilities to meet changing demands for skills training.

Curriculum planners took into consideration surveys of local and national job opportunities and requirements, the advice of citizens' committees representing all facets of the community, and observations of the experiences of other schools. The resulting course offerings, while designed primarily as equivalents of thirteenth and fourteenth year work, provide for high school dropouts or workers desiring retraining.

The Center's program does not differ greatly from

(Continued on page 60)



Vocational Education

In HELENA

A. G. ERICKSON, *superintendent, Helena, Montana.*

• **All of us know that the ultimate measure of the** success of a school is not the building, the equipment, the teachers, or the financial underpinnings that support it, but the students. What kind of people are they? And how did they get to be that way?

The 37-year-old Helena (Montana) Vocational-Technical School came into being during the depression years, when many Helena high school boys made the local airport their headquarters. These youngsters who lived for aviation proudly called themselves the Airport Gang. Their young eyes saw beyond the dreary present—beyond the hunger and lack of employment that beset the nation. Aviation was the coming thing, and youth, as always, wanted to be where the action was.

In Helena, the action centered around William Fahrner and R. E. Morrison, the two competent pilots who *were* aviation at the Helena Airport. These men had learned aviation in the days when flying by the seat of the pants was an art. They lived in the wide-open skies, loved their life there, and, what is important to this story, communicated their feelings to the eager youngsters who hung around them, hero-worshiping.

The boys' enthusiasm spread into the homes of Helena and infected some adults. As a result, Bill Fahrner and Red Morrison were invited to establish a fixed-base operation at the Helena Airport. Aviation was in Helena to stay!

Bill Fahrner, who had been an instructor at the Boeing Aircraft School in California, set up a class in aircraft mechanics as a regular part of the high school program. The city hangars at the airport provided the shop-area space and the base for practical experience; the lower level of the old city auditorium and library was the classroom site.

At no time between its inception in 1931 as a class in aircraft mechanics and its present maturity as a highly technical complex has anyone added anything to the curriculum of the Helena Vocational-Technical School that has not been based on students' needs. At no time has the school's administration allowed it to become a dumping ground for misfits who "have to be squeezed in someplace." It was designated an area vocational school in 1939 (the first in the state), and a vocational school it has remained.

The image the students have and always have had of their school is so good that neither the earthquakes that destroyed their classroom in 1935 nor World War II, which turned their beloved space at the Airport into headquarters for adult training, had the power to destroy or stop the growth of the school.

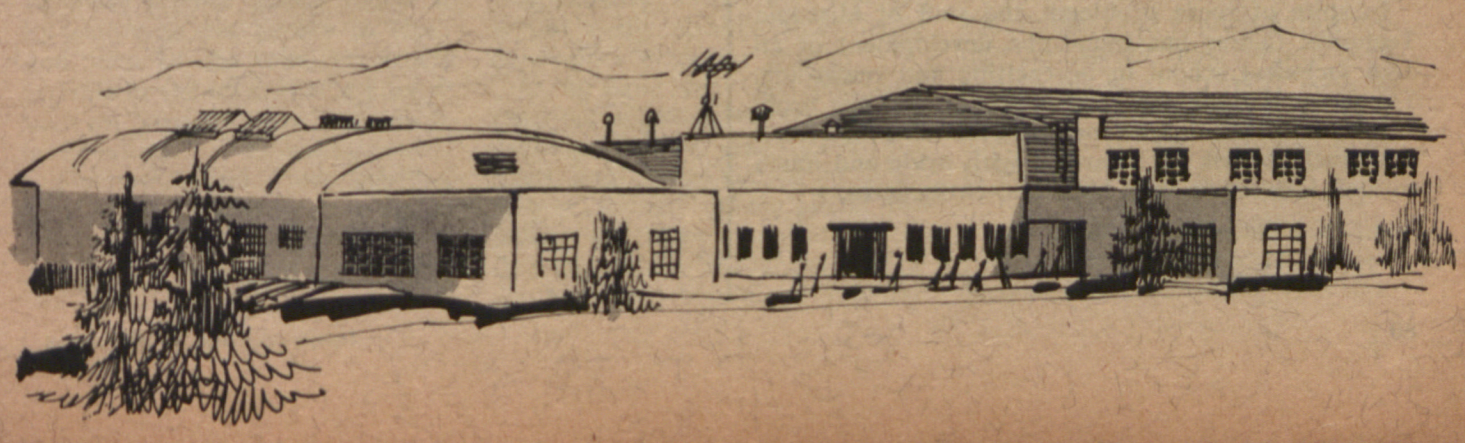
During the war, more than 7,000 people came to the school, which was by then fully developed and staffed, for training and retraining. A skilled staff of 45 instructors taught a continuing enrollment of 800 students. Many of these students went on after the war to careers in the highly specialized fields in which they had been trained.

When the hysteria engendered by the success of Sputnik triggered a sustained drive to push everything else aside in a quest for engineers, engineers, and more engineers, the Helena Vocational-Technical School pushed back. It continued to provide its students with desperately needed supporting skills, so that when, during President Kennedy's administration, publication of a study by the President's Panel of Consultants on Vocational Education breathed new life into technical education, the Helena School was already there, conducting business as usual.

The image the students in this school have had of themselves is one of pride—of self-worth. They see no reason to apologize for lack of college education, realizing that their school has enabled them to become expert in fields that have no limits in salary or other so-called criteria of success.

How does one measure success, really? If the suc-

(Continued on page 60)



In MISSOULA continued

offerings at other vocational schools across the country except that it includes career pilot training and courses in vocational forestry and heavy-equipment operation. The Center's philosophy differs from that of many, however, because of the staff's determination to design and provide for each student a program geared to his particular strengths, weaknesses, and needs.

Programs are offered only if documented evidence of job opportunities in the occupation exists. A student's placement within a program is based on tests and interviews to find out what skills and knowledge he already has and what he needs in addition to meet the performance standards of his desired work objective. This approach to program development requires extensive in-service training of the staff, who individually analyze job functions to determine course content and implementation.

The school and the state still face many problems in developing a realistic vocational education program. One of the most pressing is the need for adequate financing. At present, area schools are tied to the high school foundation program, with the result that often the people who need the training most desperately must forego it because they cannot afford to pay the costs. The present system of tuition transfer between counties does not give the area school additional purchasing power since, by law, this money must be used to reduce the local levy of the district where the school is located. School officials are faced with the prospect of "selling" local levies to operate the vocational schools—and this in a time of growing taxpayer resistance. A statewide mill levy is urgently needed.

In recent months the state has designated three more area vocational schools, bringing the state's total to five. Where to raise the money to construct and finance these additional schools will be a major issue facing the 1969 state legislature.

Another problem area is the reluctance of students to attend school year round. Montana youths are simply not accustomed to summer school attendance, and it will take time to orient them to the idea.

Finally, finding and keeping good vocational teachers on the local level is not easy. In comparison to what people can make in industry, teaching salaries are often not enough to induce people with vocational skills to join the staff. Extensive recruiting will be necessary, as well as innovation in teacher-training opportunities.

In spite of these problems, the staff of Missoula Technical Center has found the development of an area technical school to be exciting and rewarding. The cause is right, the need is urgent, and the problems can be solved. Staff members feel that the school has much to look backward to with pride and much to look forward to with hope and enthusiasm. •

In HELENA continued

cess of an individual's life can be measured at all, it must be done in terms of the person's creative reaction to his own environment. What does he do with what he has? And with what he has, how does he react to his own potential? And does he keep reaching? Does he see in the framework of his life an endless possibility for change and growth? Or does he try to freeze at some spot that seems far enough? Does he realize and grow in the realization that life means movement? That only death is static?

The alumni of Helena Vocational-Technical School measure up well by any criteria. Among them are a general, many high-ranking officers in the United States Air Force, a member of the first graduating class of the United States Air Force Academy, a liaison engineer at Boeing Aircraft, manufacturers, flight operation owners, and skilled mechanics of all kinds. Mechanics from the school can be found as farm-equipment dealers (some own dealerships), instructors in vocational education courses, shop supervisors in industry, flying farmers, pilots and mechanics with major airlines, electronic experts in communication centers, and all allied fields of endeavor.

The instructors at the school are a special breed. To know-how, they add the teacher's secret—love and empathy for the students they are teaching. The six or eight hours per day these instructors spend with their students develop a relationship that doesn't fade away.

The instructors, in spite of the demand in other fields for individuals with their qualifications, seem to stick with the school. William Korizek, present principal and director of vocational education, was one of the Airport Gang in 1933-34. He has taught in the school for over 25 years. In the 37 years of its existence, the school has had only three principals.

Helena Vocational-Technical School is what it has always been—a school that molds itself to fit the student—a school that helps him to make his dreams for tomorrow come true. •

YOU MAY NOT AGREE, BUT ...

GRAMMAR SHOULD BE GROOVIER

says **THOMAS A. LUND**

This article starts a new series titled, "You May Not Agree, but . . ." Readers are invited to react to this article and to send in manuscripts of their own for the series.

• **Ten years as a teacher of eighth** grade English has made me painfully aware of the mass boredom that grammar study can generate in the classroom. Aside from the evidence that mastery or nonmastery of grammar seems to have little if any relationship to imaginative or unimaginative oral and written expression, dissemination of language description with all its rules and constantly changing terminology seems to rank somewhere near the Japanese science fiction movie in its ability to put people to sleep. And some of the relatively recent arrivals in the lexicon of grammar, such as "structuralism," "transformationalism," "ethnolinguistics," "phonemics," and "morphophilology," while extremely prestigious for the linguist, are not exactly groovy for the eighth grader or, for that matter, his teacher.

Part of the problem, of course, lies in the fact that the vast majority of eighth graders possess an intuitive knowledge of the way their language works, a knowledge they have had, after all, in ever-increasing degree since they first began to speak. Most of them, by the time they reach me, can and do compose pretty sophisticated multiclause ideas. Some have even got the knack of imbedding their sentences with modifier-, phrase-, and verbal-clusters. In short, they use their language rather well, and this is not really strange since usage determines grammar anyway.

At the same time, alas, they sense that the teaching of grammar is nothing more nor less than an implicit and all-too-continuous predication, to wit: "I am giving you labels; see if you can tell where they go." Not infrequently, my students tell me where they would like them to go—most of the time in reasonably acceptable grammar.

Another, and I think equally important, part of the problem is simply this: Educators too often insist on teaching grammar in the environment of isolated sentences, groups of words out of context, undeveloped ideas. And so grammar books are still cluttered with exercises consisting solely of groups of unrelated sentences, and students are asked to do all sorts of strange things to them—diagram them, parse them, transpose them, label their parts, identify their patterns —when all the time the mystery they are really trying to solve is what "Gail's brother gave her the tennis ball" has to do with "A flock of pigeons flew over the post office." At their age, they recognize irrelevance all too well when they see it. Psychologists call it the unmeaningful experience. But any way you look at it, the whole of grammar learning seems to be just that, a fact students have been calling to my attention for years.

Granting, then, that teaching grammar presents problems, what do we do about them? Over the years, my students and I have conspired to develop a system in which (a) we never confront a sentence in isolation, (b) at least half of the students' exposure to grammar comes through their own compositions or those of their peers, and (c) there is no necessity for a text.

While I make no extravagant claims for the system, it has, I think, made studying grammar a somewhat more meaningful experience for us and has thereby considerably lessened classroom ennui. I should like to say "eliminated" instead of "considerably lessened," but grammar content being what it is, the hope of doing away with boredom completely would seem to be unrealistic. I hasten to add that my students and I tangle with grammar no oftener than twice a week and in bouts of no more than 15 minutes, a practice that has all but eliminated student demonstrations in my classroom.

The trouble with a lone sentence is that it is always out of context. Metaphorically speaking, it is lan-

Mr. Lund is a teacher of eighth grade English, Longfellow Junior High School, Wauwatosa, Wisconsin.

guage mortally wounded. For instance, to isolate a sentence like "The dance had begun" is to practice a kind of language homicide by truncation and, at the same time, a subtle brand of mental torture on eighth graders: What dance? Was there an orchestra? A combo? Records? Who attended? Did they enjoy themselves? Having seated our students (against their wishes) at the banquet table of language, we have insisted on feeding them crumbs. I say let them have meat instead:

". . . It was not really a musical affair; it was a soundfest. A five-piece combo periodically interrupted its rhythmic violence with earsplitting crashes and wailing voices. This was the sound of youthful enterprise, the din of teen-age success. Meanwhile at one end of the gym stood 200 chattering girls; at the other end, 150 indecisive boys. Between the two groups danced five lonely couples, only two of them heterosexual. Somehow, eighth grade dances always turn out this way."

Not succulent fare, perhaps, but it does appease because it is meaningful. Of lesser significance, it contains a goodly amount of grammatical food—three of the four patterns, a score or so of modifiers, numerous nominal functions, transposition, and a compound sentence —all of it within the framework of the kind of thing the students themselves are creating week after week. But every bit as important as relevance and content is the fact that we have given recognition to the dignity and real function of language and to the perceptiveness of students.

Given the alternatives of spending a syntactical evening with his grammar text or a commercial evening with the "Yellow Pages," I daresay almost any eighth grader would choose the latter and consider he'd got the best of the bargain. Of course, there is always a third alternative, namely, a tolerable evening with *no* text. That is the alternative my students chose long ago —naturally—and I concur, for whatever presentation exists in an eighth grade grammar text can easily be distilled to three pages of outline.

For instance, need we give any more fundamental information about an adjective than that it most often occurs in front of the noun it modifies but that it frequently modifies the subject from the predicate side of the clause? Or that transitive, intransitive, linking, and nonlinking verbs occur in S V DO, S V^{i}, S V C, and S V^{nl} patterns respectively? We can confront the subject—that is, we can belabor the point if we must—in the classroom at appropriately scheduled future sessions, which is precisely what we do in our 10 or 15 minute exposures, and often from the drawing board of our own writing (as I have said) but always in the meaningful milieu of one or more paragraphs.

Hidden, but not very well, in what I have been saying, is the implication that grammar, specifically the teaching of grammar, is irrelevant —at least at the secondary level. I feel safe on this ground, since I am hardly alone here. According to a 1963-64 experiment with matched groups of students in grades 10-12 at Ross Sheppard High School in Edmonton, Alberta, Canada, "The findings of this study support those of earlier studies that knowledge of traditional grammar is but poorly related to ability to write and that this same poor relationship is apparently found when more recent grammatical theories are used, in this case, transformational theory."

And further, "The actual practical value of teaching any kind of grammar is still very much in doubt even though this value seems to be almost the only one ever cited for such teaching. Grammar can be a fascinating study when taught for no other end than itself; perhaps it should so be taught." I detect a degree of superfluity in that last sentence, since it seems to me that the teaching of grammar has long been an end in itself. But I am prejudiced and this kind of observation answers no questions. Besides, the statement is significant in another and more important way. It suggests to me the very real possibility of grammar's ultimately becoming an elective study in our curriculum, quite apart from the courses we now label *English*. The latter might then be called by some such title as "Communications Skills," operating free of any formal grammar instruction.

Is the teaching of grammar really impertinent then? I think it is, in its present state. On what do I base my premise? Simply on the evidence of frequent written and oral expression by my students. I know none better. For five years now, with some 40 pieces of writing per student per year, the preponderant problem, I have found, has not been one of incorrect usage but rather, incorrect spelling and punctuation.

Every year I have students who are (a) inept in grammar, good at writing, and vice versa; (b) mediocre in grammar, poor at writing, and vice versa; (c) inept in grammar and inept at writing; (d) superb in grammar and superb at writing. I have tried to discover by various means some correlation, but it apparently does not exist, positively or negatively. The same lack of correlation is also true of grammar and oral expression.

Then why do I teach grammar? Because as a teacher I am expected to. Curriculum guides are harder to fight than city hall; English departments, even more so. School administrations, I believe, could be the instruments of liberation, but they will not be. Like us, they are victims of the bureaucratic gangrene that eats at the very flesh of innovation and common sense.

Yes, I teach grammar, because I'm supposed to. I teach it because my students' future English teachers will expect them to have it. That is not a very good reason for teaching grammar or anything else; it just happens to be the only picture that fits in the frame.

But as long as I have to teach grammar, I'll keep trying to think of new and better ways to make it a less traumatic, more rewarding experience for my students—hoping that somehow it will influence them in their attempts to express themselves in good English—"that form of speech," as Robert C. Pooley so aptly put it, "which is appropriate to the purpose of the speaker, true to the language as it is, and comfortable to speaker and listener . . . the product of custom, neither cramped by rule nor freed from all restraint. . . ." •

TEAM LEARNING:

"How did you work number five?"

DAVID C. MAURER, *principal, Junior-Senior High School, Honeoye Falls (New York) Central School District.*

• **How many times has boredom,** disguised as a breach of discipline, sent a student to the principal's office? A teacher's 45 minutes of classroom effort can be great—a fine presentation backed by good preparation. But 45 minutes after 45 minutes after 45 minutes? Look out for trouble from the boy or girl who sits out there smirking at the teacher and thinking words we hope he won't say aloud—"Teach, you just ain't for real."

A situation like this cries out for a strong infusion of motivation and incentive. At Honeoye Falls, New York, we think we have found an answer in a technique called "team learning." Expressed in simple terms, team learning is merely a sophisticated form of something all of us did when we were students ourselves—when we got on the telephone in the evening at home or leaned across the aisle in school to ask a friend, "How did you work number five?"

The team learning technique is really something we borrowed from our elementary school colleagues. At Honeoye Falls Junior-Senior High School, we have been in the process of converting to a nongraded secondary school for the past three years. Several of our teachers asked to investigate team teaching as a possible adjunct to the changeover. After studying the subject widely and making firsthand observations, they came up with a very pertinent question: How can we prepare youngsters for small-group discussion?

Thinking of a step-by-step approach, I suggested starting with a pair of good students, then two pairs, and four—so that over the course of the school year students could be educated to the idea and practice of seminar grouping. That's how some of the staff got started on pairing their students—a major part of team learning.

Others on our faculty came to team learning by a different route. One day, as teachers came in to see me for one thing or another, I asked them, "What if I could show you a way to cut your paperwork in half? Instead of 30 class assignments or tests to correct, what if you had only 15? Did you ever hear of homogeneous pairing? Will it work? How about trying it to see."

Ideally, homogeneous pairing takes several weeks of preparation before the semester starts. Teachers comb the records of students they are to have in the coming term, talk the kids over with their fellow teachers and the guidance counselor, and do whatever else is necessary to help them best judge which students should make up each pair. In this instance, though, the teachers who are involved have to use their own best guesses—based on students' class performance to date and on brief studies of their records—to determine how to pair them up.

By and large, the teachers were rather skeptical about team learning, but several of them tried it, more out of curiosity than anything else. After a few weeks, a math teacher reported that her worst class, now on paired learning, had become her best. I discovered quite by accident that an English class was on it when I overheard one student say to another in the hall, "If you don't do your part of the assignment tonight, I'll clobber you!" Pairing has now spread to several classes in most of the junior and senior high school subject areas.

As we gained more experience with team learning, we learned a number of things. One of the most important is that a teacher who is initiating team learning should start slowly. He might begin by selecting subject matter that is most familiar, preferably a unit whose resources readily lend themselves to team learning's most essential ingredient: teacher-developed, self-directing, self-correcting materials.

The teacher who has not had a chance to prepare for pairing students should wait until the school year has gone on long enough for him to get a good idea of what his students can do. Then he should do the pairing by putting like abilities together.

A single free copy of a newsletter from the Baden-Maurer Letters on *Secondary Trends and Issues* may be obtained by writing to Department of Educational Services, Science Research Associates, Inc., 259 East Erie St., Chicago, Illinois 60611.

The methodology of team learning is a much-modified version of programed learning. We have developed paired-activities kits (PAK's) that include as many as seven components for our teams:

1. The job spec, which is simply a program, coded by the teacher, of the subject matter normally used in the course (usually taken from the text), with units or work assignments drawn up as specifications, enumerating the particulars of the contract between the team and the teacher

2. The resource supplement, which contains review quizzes, vocabulary lists, supplemental worksheets, map exercises, guidelines for experiments, and many other aids to further work on the subject

3. Solution keys (either in the kit or readily available in the classroom)

4. Spot oral quizzes (SOQ's), the informal means by which teachers check the progress of the pairs

5. Specialization topics for those who complete their job sheets ahead of their classmates in subjects where the class must progress as a unit

6. The every-student-response (ESR), which uses either yes-no cards or Magic Slates (from the dime store), for quick review with the students

7. The paired test, a teaching-testing device that fortifies learning. Team members discuss and work out the answers together. Space is available on the answer sheet for a dissenting opinion if the pair do not agree. Individual testing usually follows paired testing.

Perhaps the greatest advantage of team learning lies in what it does for student incentive. The stimulation, motivation, involvement, and self-discipline inherent in this grouping situation have had an especially good effect on students who haven't cared up to now about school. Team learning encourages collaboration. Working in pairs, students study, plan, do critical thinking, discuss, develop assignments, report, and even take tests.

Team learning is not a gimmick. It is a system of techniques that puts the teacher in the role of catalyst, coordinator, and consultant. For years we have preached the importance of recognizing and dealing with individual differences, but the preaching and the practice have been poles apart. When the students are grouped in pairs, however, their individual differences demand individual attention. If pairing is to be properly developed and implemented, it requires constant supervision.

Team learning demands more work of the teacher than conventional classroom teaching, but it's work of a different sort. I wasn't deceiving our teachers when I said that team learning would cut in half the traditional minutiae of teaching —it does. On the other hand, it requires more preparation and classroom supervision than the conventional approach. The teacher has to be prepared at all times to meet the intellectual demands of the most advanced pair in the class in the same few minutes that he's giving guidance to a pair who might be days behind. And while he's shifting back and forth intellectually, he's constantly on the go physically, too —moving around the class, checking the progress of every team.

In some of our classes we have tried a new technique to assist teachers in the huge job of preparing materials—partnership teaching, our adaptation of team teaching. Using the same reasoning involved in the pairing of students, we have combined classes of the same subject and their teachers. One teacher constructs the first unit of study and supervises the preparation of materials—the PAK. The second teacher helps in the presentation of this unit and at the same time outlines and puts together the materials for the next one. Then they switch around.

The success we had with our beginning efforts at team learning encouraged us to look further into the technique. Supported by our Board of Education, we have been able to set aside funds for curriculum development work by teachers in the summer. Back in 1966, seven of our teachers and I volunteered to attend a team-learning institute being given at the University of Rochester for local elementary teachers. Consultants from the Boston area conducted the institute. As elementary principals, curriculum coordinators, and teachers, they had had long experience in putting into practice the ideas of Donald D. Durrell of Boston University, who originated the concept of Pupil-Team-Learning.

The following summer nine more of our teachers went to the institute and returned to spread the gospel in our faculty room.

Of course, team learning is no panacea and should not be seized upon as a solution for all problems. Some teachers choose not to use it, and those who do use it do not employ it all the time. And some teachers abandon team learning because it requires more conversation in class than they can tolerate.

As a method, team learning should never be overworked. Some pupils are too immature to be paired. Some become too dependent on a partner. Some pairs will reinforce each other's mistaken thinking. In addition, certain units of material require more conventional teaching/learning methods.

For many, there is the sticky wicket of inaugurating team learning in a school with a substantial minority group enrollment. Since homogeneous paring stresses the teaming of young people of like abilities and interests, racial separation and isolation may result when a white middle-class student is paired with a white middle-class student and a disadvantaged black with a disadvantaged black. This is not a problem in Honeoye Falls, so we simply have no recommendations about this. These are special circumstances which demand special provisions.

The advantages of team learning should, however, encourage its implementation. It has helped us to (a) individualize instruction, (b) encourage student involvement and participation (learning becomes more the task of the student and fear of answering during recitation is measurably reduced), (c) and increase student creativity (they seem to ask more provocative questions of one another and the teacher). It also enables teachers to know their students better. In short there may be a great deal of truth in the adage that students learn from one another better than from the teacher. •

CLASSROOM INCIDENT

This is another in a JOURNAL *series presenting the handling of a troublesome classroom incident by a teacher and analyses by consultants whose training and experience may enable them to contribute illuminating insights.*

• **It was the last day before Christ**mas vacation, and my ninth grade world cultures class was all keyed up. Having lived through the holiday syndrome before, I was not insisting too hard on world cultures, and the students were for the most part busy with last-minute preparations for the party they were having the second half of our double period. The refreshment committee was dividing gallons of punch and dozens of cookies by x number of consumers; the program people were involved with the skit that was to be the pièce de résistance of the occasion. At my desk, I was bending over a poster the decorating committee had brought up for admiration and approval.

As I straightened up, I received a shock of cold water in my face. Some sharpshooter with a water pistol had hit a bull's-eye. My reaction was immediate and angry. "All right! Who's the wise guy?"

The class's reaction was also immediate—injured innocence. "What's wrong?" "What happened?"

It seemed obvious enough to me what had happened, and as I mopped my face I rasped out, "I'll take that water pistol." The kids acted as though nobody had such a weapon, indeed, had ever heard of one, to say nothing of knowing how to use such a weapon. You'd have thought I had been attacked by invisible creatures from outer space.

This added to my anger. After all, I had been quite undemanding this class period, and I couldn't help feeling that this action was a pretty sorry response to my generosity. When further questioning produced no water pistol, no culprit, no witnesses to the crime, I announced that there would be no party unless the culprit turned himself and his weapon in.

This got plenty of response: "It isn't fair!" "We've worked so hard for this party." "Why should everyone be punished because of one guy?"

Well, no one confessed, so the party was off. As I saw the punch growing weaker and paler with melted ice, I felt sorry, but I stuck by my ultimatum. I reminded the class that the wielder of the water pistol was the one they should be angry with, but I could tell from their sulky looks that they blamed me for everything. It seems to me now that I could have been smarter in handling the situation, but I'm still not sure just what I should have done.

Consultants' Comments

LOIS C. BLAIR, *director of professional laboratory experiences, Indiana University of Pennsylvania, Indiana.*

Preventing discipline problems is easier than handling them, but they do occur and some action has to be taken. I can't help but wonder what the teacher might have done in the situation described if one of the students rather than the teacher had received the shock of cold water in the face. In either case, it would seem unfair to punish a whole class for one person's misdemeanor.

When the offender could not be identified quickly, the teacher might have pointed out the discourtesy and dangers involved in such erratic behavior and asked the class to help decide what action should be taken. The class as well as the teacher has responsibility for group behavior. Students frequently have better solutions to such problems than teachers have.

In the event that no action could be taken, all students could have had a learning experience, and the student who needed help might have benefited from the discussion by his peers. Since preparations for the party were interrupted, the incident created a problem that had to be discussed, if not solved, before the party could take place. I would hope that the class would accept the incident as their problem and the teacher as a mature member of their group, an adult leader among student leaders in a time of crisis.

Certainly in the future I would try to avoid such an interruption. If classroom parties prior to holidays are school policy, I would participate with students in the planning so that the party would be a real learning experience somehow related, if possible, to world cultures. If parties held on school time are to be justified, they must be planned. Purposes must be clear to both students and teacher. Procedures for achieving the purposes need to be outlined and responsibilities assigned to and assumed by

each member of the class. Criteria for evaluating the experience should be established to determine the extent to which the goals are achieved.

Holiday syndromes can and should be eliminated. Of course, children and youth are excited about an ensuing vacation; so are teachers, but vacation does not begin until a designated hour, and until that hour we have school as usual, or, at least, as planned.

MARTHA W. HUNT, *counselor, Guidance Department, Mount Vernon (New York) High School.*

Whenever a teacher gets angry, he abandons his professional role and allows emotion to take the upper hand. A sudden shot of water will upset nearly anyone, but I wonder whether this teacher didn't overreact. His treatment of the incident not only called for a considerable investment in terms of time and nervous energy, but also aroused the resentment of the whole class.

I think that the teacher should have taken into consideration the fact that the class was keyed up—perhaps in response to the teacher's mood, since this is often the case. Furthermore, he must have been aware that a festive social atmosphere had more or less permeated the normal classroom situation. In my experience, this is an unstable mix, if not, indeed, an explosive one.

Were the circumstances such that the teacher wanted to be one of the gang, it would have been possible for him to say, "Bull's-eye!" and laugh and go on with the preparations for the party. Though this is not my style, I have known teachers of all ages who could do something of the sort successfully. When it is in character, the kids love an offbeat reaction like this, and their respect for the teacher is undiminished. Such behavior evidently would not have been in character for this teacher, however, since his instant reaction was one of outrage.

Instead of making a frontal attack on the class as a whole, it might have been wiser for the teacher to question students quietly one at a time—starting, perhaps, with the three or four most likely culprits. (By December the teacher should certainly know the members of the class as individuals.)

Once the teacher had issued the "no party unless" edict with no constructive results, I think he might have turned the incident into a learning situation by engaging his students in a discussion of whether it is always right to say, "Under no circumstances will I ever tell on anybody for anything!" At first, this attitude may seem attractive and heroic, but under analysis it smacks more of the barbarian than of the civilized man. The teacher could point out that carried to the extreme, it would prevent an individual from giving eyewitness evidence of a murder.

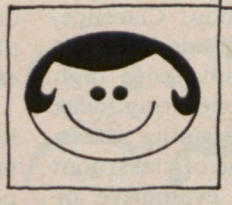
If this line of reasoning did not flush out the sharpshooter, the best solution might have been for the teacher to say that the party would go ahead as planned, after all, now that everyone had had a chance to see that the person they had protected so loyally was quite willing to let the whole class suffer for his wrongdoing. •

My talks with leading educators and visits to schools throughout the country have convinced me that U.S. education is nearing a time of dramatic change. The wonder is, when you think about it, how long our schools have managed to stay the same. Since 1930, even such staid institutions as banks have changed almost beyond recognition. And yet, the average second-grade classroom today resembles nothing so much as the classroom in which I daydreamed my way through second grade back in 1930.

A certain caution in educational matters is quite understandable. One schoolchild is far more complex, embodying far more variables, than NASA's entire satellite communications network. Baffled by this complexity, and inhibited by a reluctance to "experiment" with children's lives, educators feel justified in clinging to methods that have been developed, hit or miss, over the centuries—even when those methods are shown to be inefficient. Others take refuge in education's old conservative function of passing along the culture's median knowledge, values and ways of perceiving—just when these things are shifting faster than we can perceive.

—George B. Leonard *in* Education and Ecstasy, *Delacorte Press. 1968.*

SPECIAL FEATURE ON THE GIFTED AND CREATIVE



BE TALENT DEVELOPERS

. . . AS WELL AS KNOWLEDGE DISPENSERS

CALVIN W. TAYLOR, *professor of psychology, University of Utah, Salt Lake City.*

• **Nearly all students are talented;** that is, can be above average in at least one of the many important intellectual talents we can now measure. Furthermore, with appropriate changes in teaching, they can use multiple talents to acquire knowledge in the classroom. In fact, they can exercise and develop every one of the known intellectual talents as their minds ponder, toy with, and otherwise process knowledge. Each of these different talents can function in acquiring knowledge across all subject matter areas.

If the complexity of talents, however, is *not* recognized and students are seen through the oversimplified picture of only one talent, then they will all be lined up from highest to lowest, solely on the basis of that single talent. They may almost be pegged by teachers and students as to where they belong.

For example, Sharon, a beginning seventh grader, had consistently obtained high grades and had always done exactly what she was asked to do and in a manner pleasing to her teachers. However, her schoolmate David did not like typical school assignments and was just average or below on activities requiring academic talent.

When they were viewed across two talents instead of only one, strikingly different pictures emerged; their profiles across the two talents had quite opposite shapes. In a productive- and creative-thinking classroom where students were to be thinkers—not mere learners—Sharon's initial outward performances in the thinking activities and discussions could have been scored zero. Eventually, after many sessions of this type, she learned to participate and became a functioning, though somewhat below average, student in this productive-thinking classroom.

David, on the other hand, promptly showed great talent in thinking activities and in matching wits with anyone, including more than 15 teacher-observers one day. In this teacher-student situation, he suggested several surprising ways to vary the ongoing activities. As a result, the teacher-observers changed into participants on the same status level as the students and began dealing with them as equals. Both groups then communicated freely and frankly during a wholesome cathartic session, full of excitement and laughter.

After several highly successful performances in this new type of classroom, David indicated that he did not particularly like to read and write, but obviously he loved to learn by thinking and having lively exchanges with others. In such sessions he was a leader—socially as well as intellectually—demonstrating a great deal of thinking-talent power.

At the end of one session, we all examined David's entire elementary school record. He had started out as a B+ student and had faded to C— as schoolwork became more highly academic and less thought-provoking and own-idea-generating in nature.

The school system had continually told David that he was an unpromising person without talent and that he should prepare to drop out. Yet his performance in a thinking classroom showed that he was highly talented in an important area of talent. Furthermore, David was the only student who dickered about how much he and others would be paid for leaving their playgrounds and working with us a few days during summer vacation. He showed great promise of

being a very effective person in world-of-work activities involving thinking and exchanging ideas with others. Overall, David is probably more promising for a competitive adult career than Sharon, who is efficient at getting good grades in a closely supervised, learning-regurgitating type of system where she never has to produce and display ideas of her own.

There is merit in further extending profiles to include a third type of talent. Another boy, Clarence, not only made good grades but, unlike Sharon, also displayed a high degree of talent in generating ideas in the productive-thinking classroom. But a third type of classroom activity, calling for evaluative or decision-making talent, gave him much difficulty, especially in dealing with his own ideas, in judging which ones were good and which ones should be discarded.

Thus, his high profile lasted across only two talents, dropping in the third, decision-making.

In sharp contrast, Sally had been slightly below the middle of the class both in typical academic activities and in those demanding productive-thinking talent. However, when it came to judging ideas and making good, even wise, decisions, Sally possessed a talent strength that enabled her to select among ideas much more efficiently than could most students—including Clarence, the high idea-producer. She, like David, was high in at least one talent area. But we had to profile Sally across three talents to discover her strong talent in the priceless wisdom area.

For a third of a century, research on intellectual talents has clearly shown that we have talents of many different types, not just one academic (or "general intelligence") type. Nonetheless, this evidence can be quite a shocker to those with an overgeneralized and fixed idea about what a general intelligence test measures.

Thurstone and his students discovered the first 20 primary mental abilities. Guilford greatly extended these through his periodic table of the mind (the Structure of Intellect) with its 120 possible talents, more than 80 of which have now been discovered. From this up-to-date view, typical intelligence tests cover no more than eight talents, about one-tenth of those now known — therefore, intelligence tests do *not* cover the other nine-tenths now measurable.

We suggest a grouping of talents, based upon world-of-work needs, specifying at present only academic talent and five other often extremely important types: creative (and productive) talent, evaluative or decision-making talent, planning talent, forecasting talent, and communication talent.

If we limit ourselves to measuring students by one talent alone, we will find that only the top 10 percent are highly gifted. But if we measure across several different talents, the percent of highly gifted will increase tremendously. Across three talents, the percent of gifted in at least one talent area will, in fact, more than double; across six talents the percent of highly gifted will triple.

When we arrange a group of students on each of several talent ladders, those at the bottom of the old academic talent ladder—those heretofore labeled "educationally deprived"—will rise as a subgroup to be almost average as far as each of the other five types of talents are concerned. A third or more of them are likely to be above average on each new talent ladder. Since we have not been reaching these students, we should try eliciting as many different talents as possible. If we succeed, then those who had not been flourishing in the old talent area will discover some areas where they are promising individuals and perhaps even star performers.

If we limit ourselves to cultivating merely one talent, only 50 percent of our students will have a chance to be above the average (the median) in classes. If we consider two lowly related talents, the percent above average in at least one of the two talents will be about 67 percent; for three talents, in the mid 70's; for four talents, in the low 80's, and so on. Across six talents, about 90 percent will be above average and almost all others will be nearly average in at least one talent area. Therefore, *almost all students will be above average* in at least one talent area. (In addition, almost everyone will learn that he is below average in at least one talent area.)

Now that we know how to measure and foster multiple talents, our challenge is to find ways of cultivating most of them in school instead of letting them lie largely dormant.

Talent searches should occur right in the classroom; they take no extra time. And students can almost automatically acquire greater knowledge if they use multiple talents rather than focus directly and solely on learning facts—as they are so often asked to do. Having many pathways through their complex nervous systems, students can use several different internal talents at one time or another to process knowledge during their school week. Each student will thereby discover the talent in which he most excels. Then, whenever he desires, he can use his one highest-level talent as his own best way of acquiring knowledge.

There have always been some teachers who are talent developers —who activate human resources. Emerging from research, this multiple talent approach features all teachers as catalysts in more effectively developing individual talents in the following ways: by sharpening their abilities to *identify* student talents, by increasing their skills to *cultivate* student talents, and by *deliberately working* across a greater number of student talents than was ever before possible. For teachers, the talent developer role is becoming more important while their role as knowledge dispensers may be diminishing.

Teachers must use a different approach to foster each type of talent. They can learn about their own profiles of teaching for each type of talent. One teacher, for example, may be an outstanding developer of decision-making talent but only average as a developer of academic talent and below average as a developer of creative talent. Another may be best in catalyzing creative talents, and a third teacher may be truly excellent in developing academic talents. Different teachers

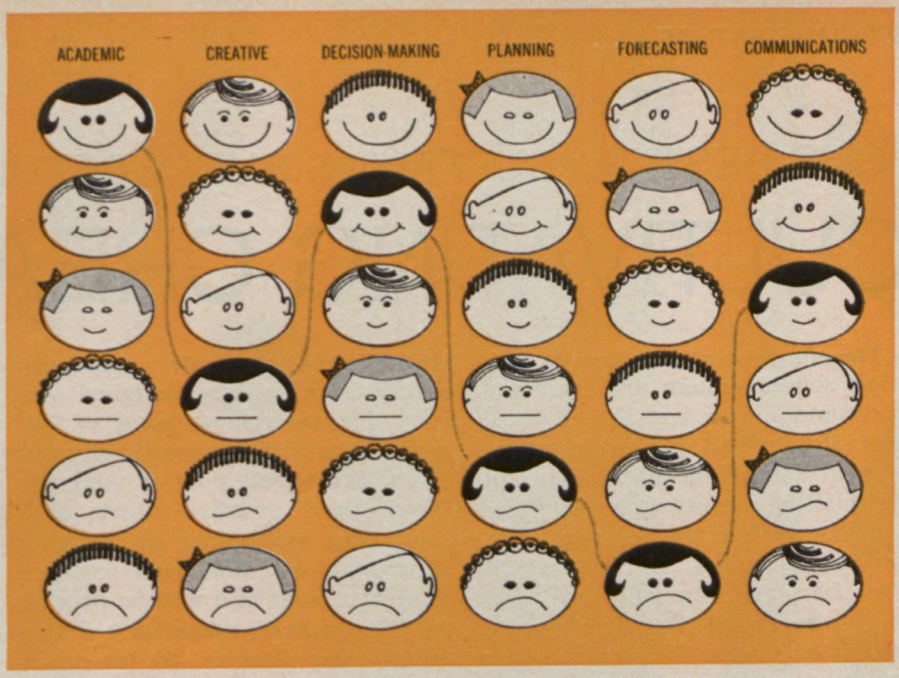
could specialize to become experts in developing particular talents—students could then study under each of these separate talent specialists.

Educational programs could be evaluated by determining (a) how much students have achieved in terms of experiencing the entire keyboard of their minds—the full range of their talent potentialities, and (b) how much they have gained in subject matter mastery. (This double perspective, incidentally, might warn us that much of the type of programed instruction typically being developed is probably narrowing the band of talents currently being cultivated.) A greater positive spread effect or transfer of training may occur through the talents developed than through the knowledge acquired. Nonetheless, multiple talent teaching capitalizes on both to increase the total transfer of training into later situations and provides the best basis available for a potent educational revolution.

But the main goal in multiple talent teaching is to have students use more talents than they do at present. The creative (and productive) type of talent is the one most ready to expand the narrow band of talents with which we now concern ourselves. To show teachers how to teach for creativity, our traveling task force team has given in-service workshops in several states. Eventually, we have the teachers do their own demonstrations of teaching for productive and creative processes in students.

We have already done the necessary "educational engineering" work by changing many tests for creative and for communication talents into a booklet of classroom exercises and by incorporating appropriate subject matter into each one. Effective classroom technologies for these two talent areas are therefore available and are being used by many teachers in Granite, Jordan, Davis County, and Iron County school districts in Utah, in Laramie, Wyoming, and in the large, important Project Impact in Polk County, Iowa.

Think what multiple talent teaching means! Regardless of the limitations of IQ, cultural background, or other learning inhibitors, this approach provides the possibility that 9 out of 10 children in a class can employ at least one talent with above-average efficiency both for acquiring knowledge and for solving problems. An exciting thought, indeed. This student-centered, talent-focused approach holds the best hope of systematically reaching each and every student in our classrooms and of finding promise in all students from all parts of our society, a partial fulfillment of one of the great American dreams.



MULTIPLE TALENT TOTEM POLES

When potentials in both creative and academic talents are viewed, colleges will face a new problem, the unmet challenge of the creative students. We appear to be in sore need of a new college planned for the creatively talented as a small start toward counterbalancing our more than 2,800 colleges and universities for the academically talented. Predicted percentile ranks in creative talent and in academic talent, respectively, on the Alpha Biographical Inventory for 34 students applying to Wilmington College in North Carolina were, at one extreme, 83-21 and 95-54 and, at the other extreme, 29-64 and 42-82.

The total annual loss of nearly a half million high school graduates who are talented in one way or another but fail to get into college is estimated from a North Carolina study. The study identified those in the top quarter on creative potential but in the bottom 60 percent on predicted academic talent. The first score is *not* oriented toward present schools, but is designed to predict creative and productive performance in one's life career. Furthermore, evidence to date on whites and Negroes indicates that this new score is racially unbiased and culturally fair.

If we apply the multiple talent approach in the educational process, greater numbers of our students will be more successful both in and out of school. A natural by-product will be an increase in each student's individuality. Each will experience and display his own unique profile across talents and will thus become more self-directed. Talents quite appropriately come at the center rather than at the periphery of our focus, for it takes talented people to solve our most difficult problems and to create a better world.

We are always heartened to find how remarkably ready students are to participate as soon as we bring each new talent adventure to them —they are our greatest asset. We must, therefore, no longer allow most of their talents to remain virtually submerged. Nor should we deprive them of the exciting opportunities and rewards that can be theirs through the awakening and strengthening of their creative and other talent powers. •

"OUR BEST" IS BUFFALO'S SUCCESSFUL APPROACH TO

CULTIVATING CREATIVITY

• **The administrative offices of Buf**falo's school system are crammed unceremoniously on the seventh floor of City Hall, a great brooding hulk of a building in the heart of the bustling downtown area.

Every spring the usually drab-looking corridors of the seventh floor blossom into color as what might be called Buffalo's annual creativity contest for students gets under way. Oil paintings, watercolors, charcoal and pencil sketches, silk-screen prints, and handwoven materials line the walls, while pottery, sculpture, jewelry, and decorative metalwork are displayed on tables.

Not on display in the hall, but stacked up awaiting evaluation by the judges are many hundreds of other entries—original musical compositions; crossword puzzles in Latin or French; write-ups of scientific experiments; mathematical formulas; essays, formal and informal; and lots of poetry—sonnets, free verse, couplets, haiku, even limericks—most of them in English but with an impressive number in Latin, French, Polish, and even Russian.

This novel contest, which has been an annual event for more than a decade, is a favorite brainchild of Joseph Manch, surely one of the most creative and offbeat superintendents extant. A onetime amateur boxer, radio scriptwriter, and poetry-magazine editor as well as a former English teacher, Dr. Manch is also a superb photographer (stunning examples of his camera work line the walls of his office) and a poet who communicates with students in verse on particular occasions and with an annual sonnet at Christmas time.

The winning entries from each school level from kindergarten through twelfth grade appear annually in a smartly designed volume illustrated with some of the winning artwork, musical compositions, crossword puzzles, and the like. (Many creative efforts that don't win top billing get appreciative oohs and ahs from teachers and classmates and may be printed in their school magazine.) Titled simply *Our Best in '67* (or whatever year it represents), it contains material virtually all of which is commendable in one way or another and much of which is startlingly good. Take, for example, the following poem by a fourth grader, which by its rhythm and choice of images is enchantingly evocative of the joy of spring:

No more leggings,
No more boots.
Bright red umbrellas.
Bursting roots.

Easter lilies.
Brand new hats.
Girls on skates.
Boys with bats.

Kites like banners
High in the sky.
I'm so happy
I could fly!

Sally Bedient

Or this one, by a seventh grader, which skillfully evokes a very different mood:

Loneliness is small and cold.
Diamonds hard and eons old.
Loneliness is sharp and chill,
Like cold grey rain on a cold grey hill.
Like a tall black rock and a seagull's cry.
Like an empty land and a sea and a sky.
Like a weed-grown track and a brown fence
Long since left to the elements.
Loneliness. . . .

Jane Hetzel

When Dr. Manch assumed the duties of superintendent in 1957, he brought with him a conviction that he had held during some 20 years of teaching in the Buffalo schools—namely, that children are profoundly influenced by the expectations of others and that if teachers start with the idea that children are creative, chances are that they will be.

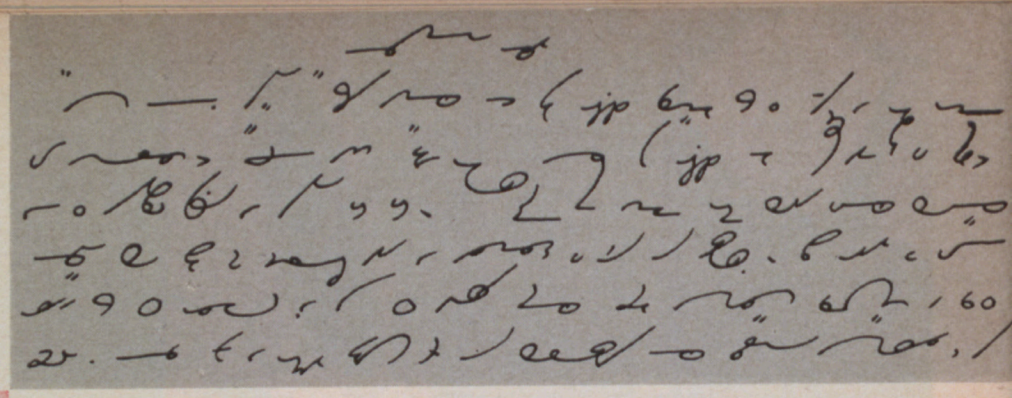
"One of the first things that I recommended when I became superintendent," says Dr. Manch, "was that we give greater recognition than heretofore to creative and artistic achievement in the schools. As a strong effort in that direction, I proposed to the board of education that it sponsor publication of the best and most original endeavors by Buffalo students in all the curriculum areas that can be reproduced on the printed page. I felt strongly about making the scope as wide as possible because children can be creative in so many different ways and yet, most school systems seem to limit their publications to prose and poetry.

Local TV programs are now making it possible to recognize an even wider range of student creativity. On one recent program, for example, a girl discussed a dress that she had designed and made; another girl modeled the dress, thus exhibiting a different sort of creative endeavor. This past May, an entire TV program was devoted to presenting youngsters whose creative work appears in the 1968 issue of *Our Best*. The Buffalo papers have done their part, too, by giving praise and encouragement to the prizewinners and to the annual publication of their efforts.

Great credit must certainly go to the hundreds of teachers and administrators for the way they help young people tap wellsprings of creativity that might otherwise remain forever undiscovered.

The director of language arts for the school system is deeply involved in the *Our Best* project. This is only natural, because even though *Our Best* volumes include

This striking mosaic, by Suzette Krampen, which appears in the 1968 *Our Best*, is made of grains of rice.



If I Were Aeneas I'd . . . or: A Note That Aeneas Might Have Left to Dido After He Had Departed

So long, my love, I have got to go.
Those mad nights in Carthage were fun.
But the Fates you see, have commanded me,
And when Heaven speaks, I run.

Your love, my dear, means the world to me,
And I hate the ocean's foam.
But if I don't discover Italy,
Where will the gods put Rome?

You must believe that I want to stay,
For you surely are aware
That the nasty sea-monsters frighten me,
And I tend toward mal de mer.

I'll think about you on the day
That Lavinia says, "I do."
I'll think about how hard you tried
'Cause you were wife number two.

Such a sad decision never came
A hero's head to bother,
From Adam and his beloved Eve,
To Oedipus and his mother.

Although my heart for you doth bleed,
There's nothing I can do.
If I disobey cruel Jove's command,
The rest of me will, too.

I've slain at least ten thousand men,
And held the Greeks at bay.
But I cannot stand to see you cry,
So I will run away.

If I do not fulfill Jove's wish,
The gods will look askance.
Since if I don't found Italy,
Italians will have to come from France.

The extra syllables in that line
You should forgive, although it
Should be quite obvious to you
That I am not a poet.

I love you so, and I'm aware
Of your passionate love for me.
So there's no need to demonstrate it
With suicidal tendency.

I'll carry always my love for thee,
To whatever lands I seek.
Forever is a long, long time.
Would you believe one week?

But if I may be serious,
It hurts to go away.
So much, my love, that on second thought
I think perhaps I'll stay.

Harvey Gitlin

contributions from industrial arts, fine arts, foreign languages, and music, the majority of entries are in the realm of creative writing.

Her major contribution involves heading up efforts to help the teachers help the students. As she puts it, "We try to show the teachers various ways of interesting children in writing and of bringing them to the point of having something to say. For example, we demonstrate how useful the overhead projector can be, either to show transparencies of pictures to stimulate ideas or to project paragraphs of student writing (generally unidentified) for analysis and criticism.

"We have a regular in-service program for English teachers right through the year because many of them are not adequately prepared when they come to us."

The language arts director is convinced—and the evidence strongly suggests—that creativity feeds on creativity and that each year enthusiasm grows both inside the schools and throughout the community.

The most obvious indication that she is right is the burgeoning size of *Our Best*. The current edition consists of 1,500 copies of 235 pages each (printed on heavy, high-quality paper). A more subtle indication is the fact that a 1963 prize-winning essay, "If I Had Been Clytemnestra," has triggered a series of pieces in the same vein, culminating in "If I Were Aeneas, I'd . . . or: A Note That Aeneas Might Have Left to Dido After He Had Departed," printed elsewhere on this page.

As in any system-wide project of this sort, plagiarism is sometimes a problem, though a minor one. In an effort to avoid it, teachers are urged to have writing done in class,

The *Our Best* series rewards excellence in such a wide variety of fields that a page of beautifully executed shorthand won a spot in the 1962 volume. Almost every year, one or more crossword puzzles are included, dealing with such subject matter as social studies (see opposite page), foreign languages, mythology, literature, or science.

and when teachers send in entries they indicate in writing that, to the best of their knowledge, all the work is original. Despite the greatest care, however, two or three plagiaries creep into most editions.

Some of the entries—particularly the poems—are imitative, but hundreds of them are patently original expressions of deeply felt emotions. Such is the following poem, which conveys the loneliness and difficulty of growing up and the inevitable self-absorption that results:

Riding
the merry-go-round that never ceases,
Swimming
in a wave that knocks on the shore and runs back to sea,
Sipping
from a stream that has strayed from its source,
Catching
snowflakes that melt before they reach my hand,
Looking
for the rainbow's other end,
Living
among millions of faceless faces,
I
Am
Alone in my search.
Yet still
Listening
with an unopened mind to all the meaningless words.
Uttering
many thoughts of deception,
Condemning
everything that might be believed in,
Forgetting
all of yesterday's lessons,
Running
from anywhere to nowhere,
I
Must
Find myself soon.
Then maybe tomorrow—I'll cry for you?

Linda Faltisco

As suggested earlier, many different departments submit entries to *Our Best*.

Even mathematics students get into the act with such entries as an article entitled "An Extension of the Normal Form of the Equation of the Straight Line" (a rather unusual solution of a problem in analytic geometry), submitted by a senior, and a "crossword puzzle," submitted by a sixth grader, which involved doing numerical calculations in Base Five instead of the usual Base Ten in order to fill in the blank spaces of the puzzle.

Naturally enough, art education is well-represented. Many of the entries are in such areas as textile design, ceramics, metalwork, and various types of graphics rather than in fine arts, because in recent years art education in Buffalo has shifted away from the purely aesthetic side toward greater emphasis on crafts. While some of the winners have gone on to further study at fine-arts institutions, others have gone on to successful careers in business and industry. One winner, for example, is now engaged in the highly lucrative if somewhat unusual occupation of designing tombstones.

Foreign language entries are numerous. *Our Best* prints two main types of material in this area: (a) original poems, essays, crossword puzzles, or whatnot written in French, Spanish, Russian, Polish, German, or Latin and (b) translations of poems from a foreign language into English poetic form. Most material is submitted by individual students but one year a group of junior high students submitted as an entry a newspaper written entirely in Latin — from sporting events to advertisements.

Two poems, printed below—one in Spanish and one in French—are roughly representative of the foreign language section. The first was written by an elementary student, and the second by a high school student.

La Piñata

Rómpela, Rómpela,
hasta que quiebre,
afuera saltan los dulces,
y después, ¿adonde fueron?

Sharon Marx

Que Suis-je?

Regardez-moi.
Que voyez-vous?
Voyez-vous la moi
Ou la pas-moi?

Peut-être vous voyez comme un bassin
réfléchit—Seulement la surface.

Vous voyez la blanche.
Mais je suis la noire,
Ou peut-être la grise,
Quelque chose indéterminée
Quelque part entre la moi et la pas-moi.

(Peut-être tu vois plus pénétrant.
Peut-être tu vois la moi.
Mais je suis la pas-moi.)

Je sais ce que je sens,
Ce que je désire,
Ce que je peux être.
Je peux être heureuse, triste, satirique
Comme les autres.

Mais je suis différente,
Unique, une
Parce que je suis la moi
Ou la pas-moi.
Mais je suis pas le vous ou l'autre.

Ellen Sanford

Each student who has a winning entry in *Our Best* receives a copy of the book, all schools receive file copies, and schools that request them may have a half dozen or so copies for use in the classroom. Civic and governmental groups receive copies, as do all PTA units in the Buffalo area. Copies are also mailed to interested citizens and educators throughout the nation. (Indeed, a sample volume sent to the JOURNAL office originally prompted this article.)

Obviously, *Our Best* represents a great deal of work for teachers and administrators. It is also a fairly expensive enterprise, currently costing a total of about $3,000 a year (1,500 copies at $2 apiece). But whether judged in terms of time or money, the *Our Best* series is a gilt-edged investment—in constructive public relations and in the motivation it provides youngsters from the primary grades through high school to strive for excellence in many different fields of endeavor.

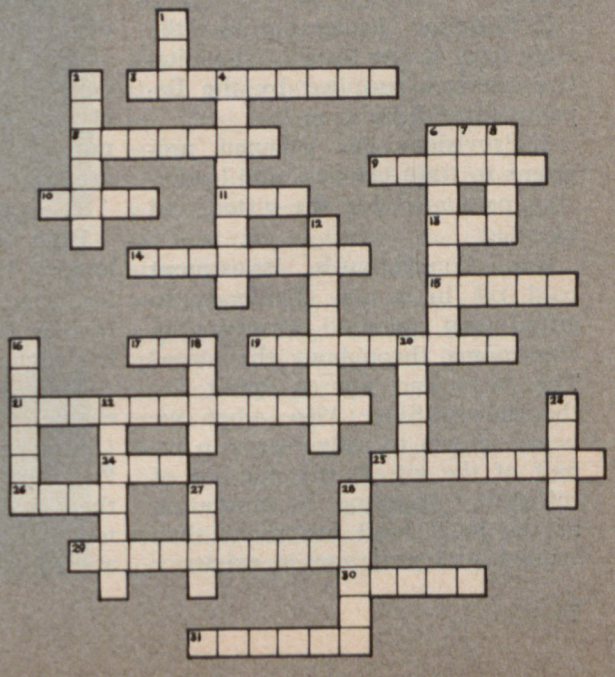
—Marion B. Tucker, *senior assistant editor,* TODAY'S EDUCATION.

For solution to puzzle, see page 85.

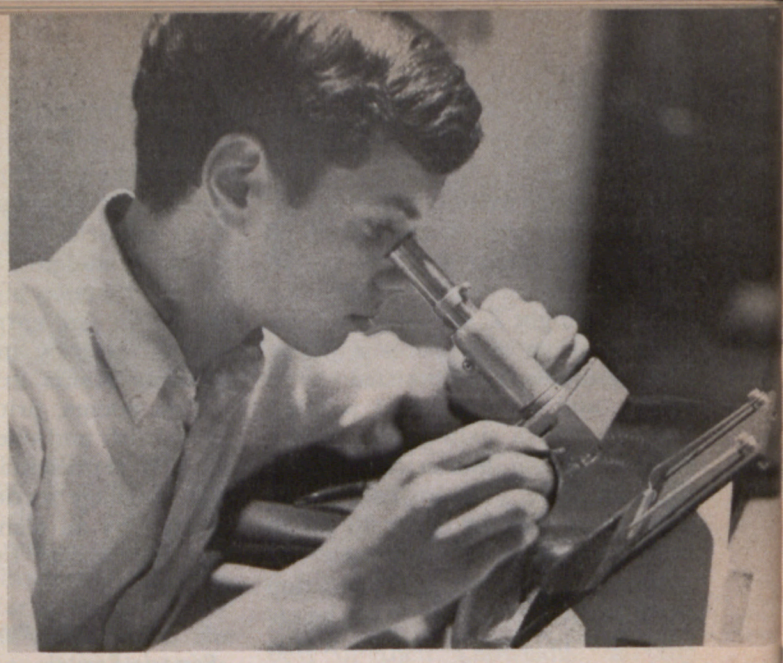
PRESIDENTS AND VICE PRESIDENTS CROSSWORD PUZZLE

Across
3. He purchased the Louisiana Territory.
5. President during the Civil War.
6. A small, blind, flying animal.
9. Missouri senator from 1935 to 1945, and later President.
10. The Mexican War was fought during his term as President.
11. Homo sapiens.
13. A head covering.
14. The first President to die in office.
15. Vice President under Eisenhower.
17. Initials of our 35th President.
19. He was an Indiana senator before he became Vice President.
21. The youngest Vice President ever to be inaugurated.
24. Hearing organ.
25. James Monroe came from this state.
26. The five digits on each foot.
29. Herbert Hoover belonged to the _____ party.
30. He arranged a plan for German reparations after World War I.
31. _____ Clinton was our 4th Vice President.

Down
1. Eisenhower's nickname.
2. The President during World War I.
4. Succeeded Zachary Taylor in the presidency.
6. The only President that never married.
7. Morning (abbreviation)
8. Secretary of War under President Theodore Roosevelt.
12. This President's nickname was "Silent _____."
16. Vice President under McKinley.
18. William _____ was the third Vice President to die in office.
20. Former U. S. ambassador to United Nations (first name).
22. President Arthur's first name.
23. Harding came from this state.
27. An infant.
28. The part of an object that is grasped.



SPECIAL FEATURE . . .



THE CONNECTICUT PROGRAM FOR THE GIFTED

JOSEPH S. RENZULLI, *assistant professor of educational psychology, University of Connecticut, Storrs; and* **WILLIAM G. VASSAR,** *consultant, Gifted and Talented Programs, Connecticut State Department of Education, Hartford.*

• **The challenge of special education** for gifted and talented children is by no means a new concern, but the technological developments and ideological conflicts of the modern world have given a new urgency to the role that education can and should play in making the most of human resources. Connecticut accepted this challenge, focusing on three essential, interrelated components:

1. State legislation that provides financial support to local school districts to reimburse them for programs

2. Full-time leadership at the state level in the form of consultative services supplied by the Department of Education

3. Provisions for planned programs to train teachers and leadership personnel for the gifted and talented.

Has Connecticut's investment paid off in actual dividends to gifted and talented students in classrooms throughout the state? The facts and figures speak for themselves. Since 1966, when we began efforts to rally forces in behalf of the gifted, the number of different programs in operation at the local level has more than tripled, and programs in existence prior to 1966 are now providing for more than twice as many students.

In addition to programs already operating, 24 proposals are now being prepared for reimbursement approval. More than 700 teachers, counselors, and leadership personnel have enrolled in courses and workshops to prepare for new or impending programs. Approximately a thousand persons attended short-term institutes and conferences devoted entirely to programing for gifted and talented students. To broaden the state's perspective in the field of the gifted, most of our conferences used nationally known leaders in this field as resource persons.

But the excitement of Connecticut's mobilization for gifted and talented youth lies not in numbers but in the variety of new vistas that have been opened for the students themselves. A few examples of imaginative programs and student reactions will give the flavor of the excitement that growing numbers of teachers and students are experiencing.

High on a mountaintop overlooking the Connecticut River Valley, a science center housed in a former Nike missile base is offering high-ability students a chance to learn firsthand the nature of scientific research. Project SHARP (Summer High Ability Research Program), operated by the staff of the Talcott Mountain Science Center for Student Involvement, enables gifted high school students to conduct original scientific investigations under the guidance of practicing scientists.

To cite just a few examples: Andy Forsyth from nearby Newington studies solar radio signals with the Center's 20-foot radio telescope. Stewart Liftig from Avon experimented with a gas laser and varying optical configurations to produce holograms of three dimensions. Raymond King from Hartford constructed a speech synthesizer to produce vowel sounds. And Susan Ripley from Granby investigated the effect of topography on the microscale temperature and wind patterns on Talcott Mountain. The young scientists found (and the State Geological Survey subsequently confirmed) a previously undiscovered fault in the earth's surface and subsequently wrote and submitted two papers for publication in geologic periodicals.

In the small rural community of Brooklyn, Connecticut, a special program entitled Project Challenge is providing a group of highly able elementary school youngsters with opportunities to explore segments of knowledge that are seldom included in the regular elementary curriculum. Philosophy, literary and art criticism, computer programing, and U.S. foreign policy are only a few of the subjects that the children deal with in seminar fashion. They base discussion and debate on reading material that is for the most part far too dif-

ficult for children of average ability and comparable age. Each area of study in Project Challenge usually concludes with productive thinking and writing activities.

In operation for only one year, the Project has already received the enthusiastic acceptance of the participants and their parents.

In Greenwich, highly able fourth, fifth, and sixth grade youngsters from 12 elementary schools are transported to the Cos Cob School one morning and one afternoon each week to work under the direction of specially selected teachers and highly talented persons residing in the surrounding area.

The purpose of these special Laboratory Workshop classes is to help gifted students identify interests in intellectually challenging areas and to give them opportunities to pursue these interests through independent study, individual research projects, and creative activities. The program does not replace the regular school experience but, rather, capitalizes on periods of time that the bright youngsters have at their disposal as a result of their ability to move through the regular curriculum more quickly than average students.

The effective use of community resources is a highlight of the Greenwich program. Scientists, authors, leaders from business and industry, and local artists willingly contribute their time to the development of youngsters who might follow in their footsteps.

Anthony Di Preta, cartoonist for the well-known comic strip *Joe Palooka,* was amazed at the originality and enthusiasm of students in Workshop classes, especially the work of one highly creative youngster who was in the process of publishing his own comic book, which dealt satirically with existing comic book heroes. A profound advocate of nurturing special talents as early as possible, Mr. Di Preta encouraged the young cartoonist to develop his own creative style and provided invaluable technical assistance.

A special program in Norwalk for artistically talented elementary school pupils tries to foster originality and fluency in producing visual symbols and to cultivate an experimental attitude toward using art techniques in various media. Materials and ideas presented to the creative child in this program vary greatly from those of the regular curriculum. The fourth, fifth, and sixth grade creative classes paint with oils and acrylic paints; make serigraphs, woodcuts, and wood sculptures; and design decorative machines that move. Their joint projects involving mosaics, wood, and metal have become part of the permanent decor of building interiors and exteriors.

In addition to the regular art class, the talented pupils from all three grade levels attend a 90-minute class twice a week. An itinerant teacher conducts these classes in 10 schools. The teacher, who bases each unit on a single art medium, motivates the class to approach the units in a creative, problem-solving way, thus eliciting a greater range of individual response. Originality and independence of thought are stressed, and pupils are required to submit many ideas, rather than just one, for their individual projects.

The Norwalk program is also providing differential experiences for academically gifted students

and for students with unusual talents in areas other than art. A particularly exciting phase of the program deals with the techniques of film making and videotape productions. Students are encouraged to explore unusual uses of these media.

A new program in Farmington is attempting to combine music, the visual arts, and the performing arts into an integrated experience in the humanities. Sixty students in grades 9 through 12 were selected for the pilot program because of their high abilities both in academic areas and in the creative arts. Flexible scheduling allows gifted and talented students in English, French, art, music, and drama to come together during special periods to pursue ideas that cut across traditional subject matter boundaries. In addition to group activities that emphasize the free exchange of issues and ideas, the program provides for individual tutoring and counseling, special field trips, and presentations by distinguished representatives from various disciplines.

Begun as a summer institute, the Farmington program is being continued during the school year with overwhelming enthusiasm on the part of students, teachers, and parents. One mother expressed her feelings in a letter to the board of education: "When the summer institute was first discussed at home, our daughter was rather indifferent but finally said, 'OK, I'll go if you want me to.' But when the program was over, she was quite sad to have it end."

One of the most exciting programs in operation in Connecticut is the Independent Study Program of the Hamden-New Haven Cooperative Education Center. At the Center, which is located on the former campus of Quinnipiac College, 60 highly gifted students from three inner-city high schools and 20 students from a suburban high school are engaged in independent studies. The students pursue one of four disciplines (English, mathematics, science, social science) in lieu of one course at their home high school. These pupils come to the campus five afternoons a week to work under the guidance of four highly qualified professional educators supplemented by resource personnel from Yale University and other area institutions of higher learning.

The progress of many inner-city youngsters has been remarkable. Andy, a social science student with a long record of poor performance in his regular school program, volunteered at the end of an independent study in economics to write a paper on his topic. When told that this was unnecessary, he said. "But now I have something to write about," and he sought the help of his English teacher so that his paper would be perfect in every detail.

Another social science student named Larry showed a good deal of verbal hostility toward his independent study director because the latter posed questions instead of giving Larry the information he wanted. But at the end of the year, Larry commented, "Asking the right questions is really the important thing. Every time I get near the end of my work I begin to ask questions and this makes me realize all the problems that are yet to be studied."

One student at the Center, working in cooperation with a graduate student at Yale, developed a method for studying aggressiveness in chipmunks. An ingenious arrangement of interconnected cages and strategically placed feeding bowls allowed the young scientist to study aggressiveness both within and between species. He hypothesized that the chipmunks must have some auditory signal system and is presently attempting to construct equipment that will enable him to "bug" the chipmunks' environment.

A disturbance in one of New Haven's high schools led two students in the Quinnipiac program to develop a rather sophisticated sociological study. They arranged interviews with school administrators, teachers, parents, and students, and are now in the process of preparing a documentary film that will attempt to express the innermost feelings of various groups of persons who were affected by the disturbance in the high schools.

A new curriculum development project in Connecticut's capital represents still another approach to programing for the gifted. Operation ASTRA, the Hartford Regional Planning Program for the Academically Gifted Child, combines the respective competencies of teachers, subject matter experts, and educational specialists in a curriculum development effort that involves Hartford, eight surrounding communities, the University of Connecticut, and the Connecticut State Department of Education.

Supported by a PACE grant, the project aims to construct a series of supplementary enrichment units specifically designed to further the development of gifted youngsters through independent study. The long-range plan will embrace all subjects and grades; however, initial work is focusing on the middle-grade level in the areas of mathematics, the humanities, and the social sciences.

The units deal with methods of inquiry and unitary themes within disciplines, and themes that cut across the traditional subject matter boundaries. The design of the units encourages maximum involvement on the part of students, with emphasis on selective reading, writing, discussion, and creative production. The curriculum development teams working in cooperation with a media specialist ultimately hope to produce and package comprehensive sets of units that are readily adaptable to a variety of situations where enrichment is desirable.

The programs discussed above are only some of the new and promising efforts being made throughout Connecticut to provide quality educational experiences to meet the needs of the state's gifted and talented pupils. They are representative of practices for gifted and talented pupils in a variety of demographic settings in Connecticut—urban, suburban, and rural. Equally exciting programs exist in numerous other communities throughout the state, and many more are currently in the planning stage. •

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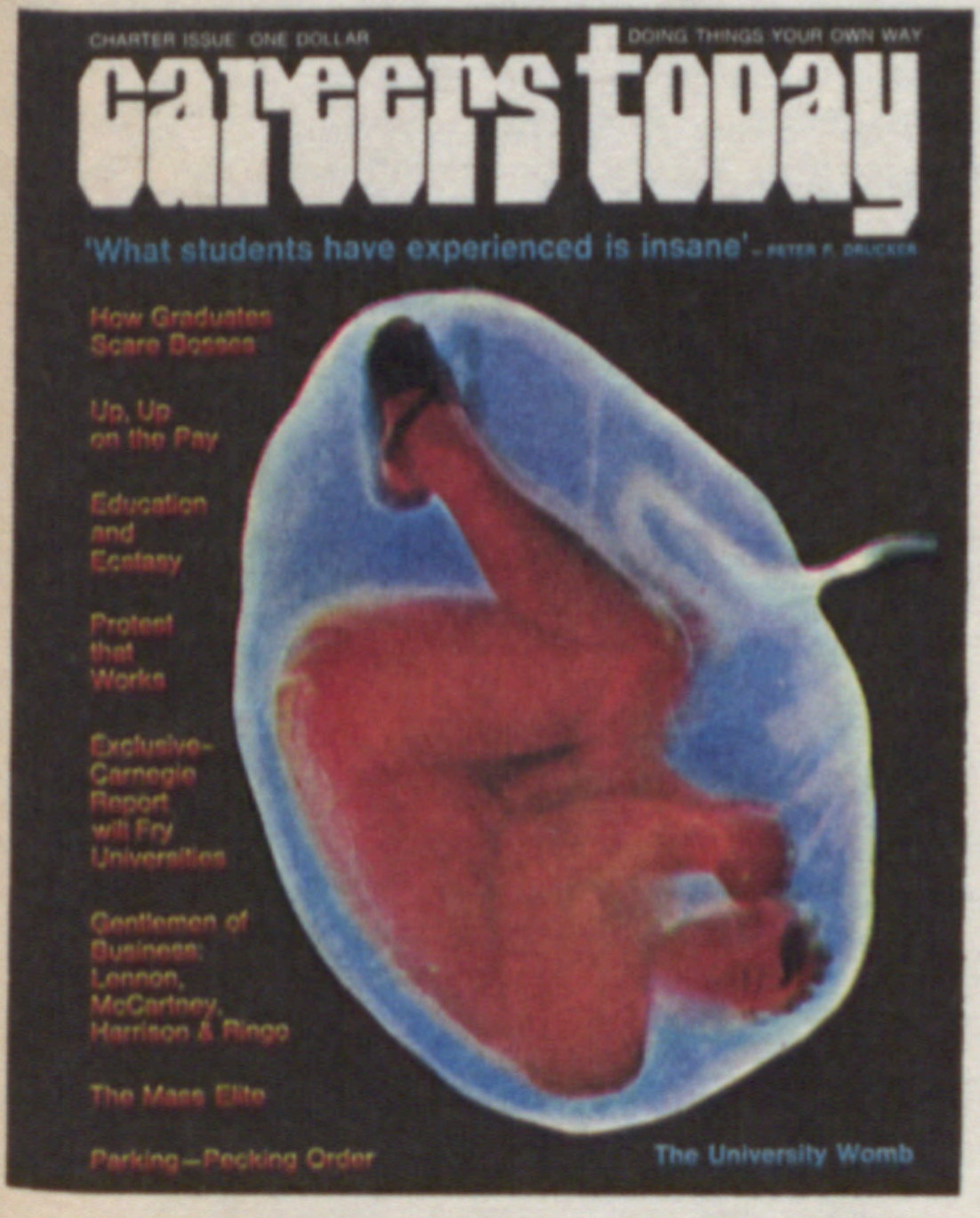
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INTERACTION
BRIEFS

DIAGNOSING A CLASSROOM PROBLEM

Can your students discuss things productively, express themselves freely, listen intelligently? Do they accept differences of opinion, work well as a group, take proper responsibility for classroom planning and decision making? Are they sensitive to each other's needs? Can they evaluate their own progress?

Many of the techniques used to help adults develop these skills can also be effective in the classroom. This year TODAY'S EDUCATION *is carrying a monthly series of "Interaction Briefs" aimed at presenting these techniques to teachers. They are prepared by Dorothy J. Mial, director of the Center for the Development of Educational Leadership, and Stanley Jacobson, director of the Division of Information Services, NTL Institute for Applied Behavioral Science (formerly National Training Laboratories, a division of NEA, and now an autonomous organization associated with NEA).*

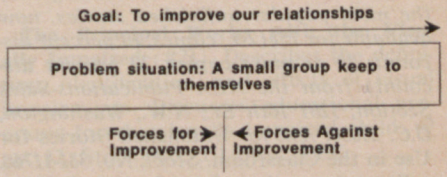
Goal of the series is to help teachers and administrators increase students' ability to be aware of and understand their own and others' views of the world, develop students' skill in group planning and decision making, enable students productively to discuss controversial issues, and increase their commitment to the educational process.

• **When a doctor asks his patient** "What hurts?" he is beginning his diagnosis of a problem. Once he knows all the symptoms, he can decide which ones are important and which can be relieved. He understands the problem and can determine what actions to take.

Diagnosis is also an important step in solving classroom problems. A class may be facing a specific problem: The same few students are always the ones to raise their hands, or a clash has developed between subgroups in the room. Or perhaps the students want to work on one of the kinds of projects mentioned in last month's *Interaction Briefs;* for example, how to improve the classroom climate, how to make lunchtime more relaxing, how to learn most about a specific subject. Once the problem or idea has been clearly stated, the next step is diagnosis—finding out why the present situation is as it is. Through problem diagnosis, students can move from creative thinking toward creative action, and also learn to be more effective problem solvers.

An interesting method of diagnosing a problem that children as young as third graders can engage in is called force-field analysis. [See "Force-Field Analysis" in the March 1968 JOURNAL and *Handbook of Staff Development,* pp. 105-111. NTL Institute.] It is an approach developed by social psychologist Kurt Lewin, who saw a problem as a state of affairs kept constant by equal pushes in both directions—"an equilibrium maintained by a balance of driving and restraining forces," to use Lewin's language. To Lewin, changing a problem situation was a matter of altering the balance in this field of forces. Force-field analysis, a way of diagraming this view of a problem, has proved to be a widely useful technique.

Let us say the goal is to "improve our relationships in this class" and the problem being focused on is the divisive influence of a small clique. The situation would be diagramed this way:


Goal: To improve our relationships
Problem situation: A small group keep to themselves
Forces for Improvement
Forces Against Improvement

In the left column would be listed all the facts, attitudes, feelings, and so on that push toward making the small group more a part of the class. In the right column would be listed everything that tends to make the small group more tightly knit and exclusive. After the lists are made, the class can determine which positive forces can be strengthened and which negative ones can be decreased.

To use force-field analysis in the classroom, have the class select a problem and state both the goal and the problem situation. Draw the diagram at the top of the chalkboard, explain it, then ask the group to start naming forces to go in

either column. The beginning lists might look like this:

Forces for Improvement	Forces Against Improvement
others feel left out	people in the small group like one another
interest in the small group interferes with attention to classwork	it's natural to have special friends
we should all be friends	the class is too big

Given time and encouragement, pupils should be able to come up with a number of enlightening ideas. Some factors—class size for example—will be difficult, if not impossible, to do anything about; but the group can work on a number of the ideas.

Some factors will lend themselves to a force-field analysis of their own. For example, if "people feel left out" is taken as a problem statement, the group can list all the forces in the classroom that push toward and against feeling "left out." Other listed items might lend themselves to committee work. In the illustrated problem, a committee might work on "how we can keep interest in the small group from interfering with classwork." The class may produce creative action steps which will improve relationships without requiring authoritative decisions by the teacher.

With experience, force-field analysis becomes a way of looking at a problem situation that brings greater breadth and more innovative ideas to the consideration of solutions. •

Teachers who tried the brainstorming session described in last month's *Brief* may want to have the class choose one of the ideas from that session to work on. Here is a way the class can make its choice and learn how to screen ideas at the same time.

1. Discard all proposals that are too difficult. For example, an idea that would require convincing the school board to rebuild the cafeteria is probably beyond the power of the class. In general, any idea requiring a major decision or major effort by people outside the classroom ought to be eliminated.

2. Decide which two or three of the remaining ideas are most popular. One method is by a show of hands. Another is by rank ordering. (Assuming there are five ideas to choose among, have each student give five points to his first choice, four to his second choice, three to the third, and so on. Add the scores of each idea to arrive at the two or three most preferred.)

3. Determine which of the ideas seems most workable by asking questions like the following: Who would have to do what to make this idea work? How much time would it take? What help would we need?

4. Make the final choice by consensus, show of hands, or a second ranking.

UNFINISHED STORY

The editors present this story for classroom use as a basis for group discussion, role playing, or creative writing. They also call attention to a booklet containing 44 of the most popular unfinished stories, now available for 75¢ (2-9 copies, 10 percent discount; 10 or more copies, 20 percent discount) from the NEA Publications-Sales Section, 1201 16th St., N.W., Washington, D.C. 20036. Ask for Unfinished Stories for Use in the Classroom. *Stock No. 381-11766.*

For information about 8mm and 16mm color films based upon some unfinished stories, write to Educational Systems Division, Doubleday & Co., Inc., Garden City, New York 11530.

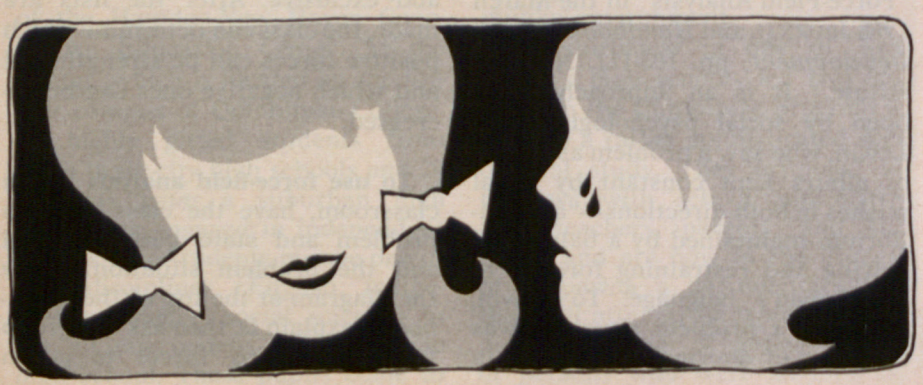
What Should Roselyn Do?

Roselyn was certainly not an ugly girl, but no one would call her pretty, either. She decided that she was the kind of a girl who could go to a party without having anyone remember afterward that she had been there.

Her hair was neither blond nor brunette, but sort of in-between. Her eyes were small and her nose a trifle pinched. If there was one thing Roselyn didn't want, it was anything to go wrong with what she already had. It was hard enough trying to look attractive the way she was.

For some reason she had never worried too much about her teeth. The bottom row was a little crooked, and her top teeth stuck out a wee bit more than they should. But they never showed if she kept her mouth closed, and Roselyn wasn't so popular that she was laughing and talking all day long.

It wasn't until the dentist announced that "it was time," and her mother nodded, that Roselyn grew apprehensive.



When she was taken to the orthodontist to have her teeth straightened, her panic grew.

"Like many other young ladies," the big man smiled, "Roselyn needs braces. But when she's eighteen, she's going to have a beautiful set of teeth."

At that moment, Roselyn didn't care at all about what happened when she was eighteen. She cared about how she looked right now. It wasn't enough that she wasn't pretty or couldn't carry a tune or had skinny legs. Now she had to wear horrible metal braces on her teeth until she was eighteen years old!

After her umpteenth visit to his office, the orthodontist finally clamped the strange metal contraptions on her teeth. When she reached home, she shut herself in her room and stared at herself in the mirror. She couldn't stand those horrible braces! She'd take them out on the way to school and hide them in her coat pocket. She'd lose them, step on them, do anything for an excuse not to wear them. And whenever she *did* have to wear them, she'd simply not talk. She'd never smile, answer a question in class, speak to anybody in the hall, or laugh. . . .

She was miserable, and she felt trapped. What should Roselyn do?

Thoughts To Think Aloud:

1. Is it likely that others will pay as much attention to Roselyn's teeth as she imagines?

2. Are most people perfect, or do most of us need some sort of corrective help—glasses, medicines, or such?

3. Might others take their cue from Roselyn and react to her braces the same way she does, whatever that might be?

NEW NEA PUBLICATIONS

This listing is prepared monthly to keep members informed of the newest professional books, pamphlets, and audiovisual materials published by the NEA and its units.

The American Citizens Handbook (#1). Revised edition. Gives pertinent information on the fundamentals of good citizenship. Includes the Constitution and other documents of freedom, speeches and quotes from famous Americans, and 200 illustrations. 640 pp. $6. Stock No. 491-15216. National Council for the Social Studies.

Annual Safety Education Review 1968 (#2). A comprehensive report of safety education research, the official's role in sports safety, and safe practices for gymnastics teaching. 88 pp. $1. Stock No. 244-07950. American Association for Health, Physical Education, and Recreation.

Approaches to Public Relations for the Music Educator (#3). Contains practical approaches and techniques for use by the individual music educator in relating to the public. 44 pp. 50¢. Stock No. 321-10346. Music Educators National Conference.

Business Education: An Evaluative Inventory (#4). In this 1968 Yearbook, 30 business educators examine past strengths and weaknesses of business education and prospects for the future. 380 pp. $4.75. Stock No. 080-19336. National Business Education Association.

College and University Acceptance of High School Art Credits for Admission (#5). Gives the results of a survey of colleges and universities to determine whether they accept high school art credits for admission requirements. 16 pp. 40¢. Special discount: 25% (10 or more copies). Stock No. 061-02238. National Art Education Association.

Completed Research in Health, Physical Education, and Recreation (Volume X-1968) (#6). A compilation of recent research on the subject, including unpublished master's and doctor's theses prepared for 60 institutions. 150 pp. $2.50. Stock No. 248-07954. AAHPER.

Desirable Athletic Competition for Children of Elementary School Age (#7). A report of research on the effects of competition on young children. 36 pp. $1. Stock No. 241-07964. AAHPER.

Dissonance and the Search for Human Dignity (Volume 32, No. 1) (#8). Fall 1968 issue of *Journal* of NAWDC. A collection of 14 articles, many of which were originally given as speeches at the 1968 NAWDC convention, which had as its central theme the subject described in the title. 48 pp. $1.25. Stock No. 596-17116. National Association of Women Deans and Counselors.

Documentary Report of the Tanglewood Symposium (#9). Includes papers, speeches, discussions, and committee reports on the theme "Music in American Society." 244 pp. $6. Stock No. 321-10366. MENC.

Effect of Self-reflective Training in Art on the Capacity for Creative Action (#10). Contains findings based on previously developed theory of artistic action or "strategies" of artistic behavior. An exemplary study for researchers. 16 pp. 50¢. Stock No. 061-02242. NAEA.

Exceptional Children Research Review (#11). Reviews and discusses recent research studies in the various fields of special education. 263 pp. Cloth, $6.75, Stock No. 551-21034; paper, $4.75, Stock No. 551-21032. Council for Exceptional Children.

Guiding Student Teaching Experiences (#12). Bulletin No. 1 (reprint). Describes the role of the faculty, the principal, and the supervising teacher in guiding the experiences of the student teacher. 25 pp. $1. Stock No. 867-24466. Association for Student Teaching.

ICHPER Questionnaire Reports (#13). Data compiled from the 1968 and 1963 survey studies provide a current comparative picture of physical education in more than 80 countries. Each, $2. *Part I: Physical Education in the School Curriculum.* 128 pp. Stock No. 248-07956; *Part II: Teacher Training in Physical Education.* 144 pp. Stock No. 248-07958; *Part III: Status of Teachers of Physical Education.* 144 pp. Stock No. 248-07960. AAHPER.

Inquiry in the Social Studies (#14). Social Studies Readings, No. 2. Focuses attention on "inquiry" as an effective approach to learning in the social studies. Part I contains articles dealing with theory and rationale; Part II has articles on strategies and examples. 128 pp. $2.25. Stock No. 491-14898. NCSS.

Learning To Read: The Great Debate (#15). Research Review, No. 3. An in-depth review of the recent research study by Jeanne Chall. Leaflet. 15¢. Stock No. 282-08862. Elementary-Kindergarten-Nursery Education.

Membership Directory and Data Book 1968-1969. (#16). Yearbook. Includes alphabetical list of members by states, and information about committees, affiliate organizations, and the DAVI constitution. 185 pp. $25. Stock No. 071-02878. Department of Audiovisual Instruction.

The Negro American in Paperback (#17). List of paperbound books on the Negro American, compiled and annotated for use in secondary schools. Revised 1968 edition with 140 new titles. 49 pp. 50¢. Stock No. 381-11796. Center for Human Rights.

New Media and College Teaching (#18). Reports the current uses of the new technology in college teaching, based on a national survey. 193 pp. Cloth, $8.50, Stock No. 251-08288; paper, $6. Stock No. 251-08286. DAVI, in cooperation with the American Association for Higher Education.

Physical Activities for the Mentally Retarded (Ideas for Instruction) (#19). Discusses organization of large groups for instruction, fundamental teaching methods, visual aids, equipment. Includes bibliography. 137 pp. $2. Stock No. 245-07952. AAHPER.

Planning for Educational Development in a Planning, Programming, Budgeting System (#20). Explains what PPB systems are and shows how they may be used in education. 46 pp. $1. Stock No. 511-20830. NEA Committee on Educational Finance.

The Principal Works with the Visually Impaired (#21). Describes the definition, identification, and effects of visual impairments. Discusses educational programs for the visually impaired child. 67 pp. $2. Stock No. 551-21012. CEC.

Report of the Task Force on Human Rights (#22). Discusses the relevance of the fight for human rights to the NEA, traces the history of discrimination in American institutions, describes how the schools deal with human rights of certain groups, and recommends ways to help end infringement of human rights in the schools. 96 pp. $1. Stock No. 381-11834. Center for Human Relations.

The Rescheduled School Year (#23). Research Summary 1968-S2. Summarizes research and describes experimentation with various plans, such as the all-year school and extended school year. Includes information on the newest plans developed. 38 pp. $1. Stock No. 434-22812. Research Division.

Selective Music Lists 1968 (#24). Includes listings of sacred and secular choral music and vocal solos, and a directory of publishers. 88 pp. $2. Stock No. 321-10364. MENC.

This is a black-and-white reproduction of one of 72 color frames in the new NEA filmstrip, *Motivation in Teaching and Learning.*

Structure in the Social Studies (#25). Social Studies Readings, No. 3. Designed to present issues, problems, and possible approaches to curriculum planning in the social studies. 128 pp. $2.25. Stock No. 491-14900. NCSS.

Viktor Lowenfeld Speaks on Art and Creativity (#26). A selection of speeches given during his years of teaching and lecturing in art education. 64 pp. $1.50. Stock No. 061-02244. NAEA.

What Research Tells the Coach About Distance Running (#27). Describes the distance runner, training, physiological considerations, and environmental influences. 56 pp. $1.50. Stock No. 241-07944. AAHPER.

You and the 4th R: Research (#28). Shows the teacher the value of research projects and suggests ways he can apply findings to his own situation. EIS Leaflet. 1-10 (20¢ each); 11-20 (15¢ each); over 20 (10¢ each). Stock No. 282-08858. EKNE.

Motivation in Teaching and Learning (#29). A 19-minute color-sound filmstrip based upon a booklet of the same title in the "What Research Says to the Teacher" series for use in preservice and inservice teacher education. Complete narration and music on a 33 1/3 rpm record. $8. Stock No. 388-11844. Association of Classroom Teachers.

Order the following publications directly from the World Confederation of Organizations of the Teaching Profession, 1330 Massachusetts Ave., N.W., Washington, D.C. 20005. NEA discount does not apply.

Education Panorama: The WCOTP Record. Volume 10, No. 1, 1967. This quarterly magazine gives the history of the Confederation over the last 15 years. 33 pp. 75¢.

A Text Book Writing Guide for Teacher Organizations in Africa. Designed to assist African teachers in the writing of textbooks, 90 percent of which are now imported. 35 pp. $1.

FREE MATERIALS
(single copies)

To obtain, write directly and separately to the publishing unit for each item desired. Unless otherwise indicated, address the unit at 1201 16th Street, N.W., Washington, D.C. 20036.

Any Ideas Here for Teachers? A speech presented to election officials, outlining steps that could be taken to enlarge registration and voter turnout. 8 pp. Stock No. 101-03460. Citizenship Committee.

Color in the Political Climate in Your School District. Describes the TIP Specialist Program, a consultant service offered to affiliates by the NEA Citizenship Committee. Stock No. 101-03458. Citizenship.

"Responsibility To ACT" Poster. Illustrates the ACT theme for 1968-69. Available in two sizes: 8" x 11", Stock No. 118-03934; and 17" x 22", Stock No. 118-03938. Association of Classroom Teachers.

ORDER FORM

To order new NEA publications listed on these pages, simply refer to the list number given in parentheses immediately after each title. Then enter the quantity desired next to the corresponding number on the order form below. Mail this form to the Publications-Sales Section, National Education Association, 1201 Sixteenth Street, N.W., Washington, D.C. 20036.

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IDEA EXCHANGE

TODAY'S EDUCATION *will pay $5 for each item used in "Idea Exchange" that has been prepared and submitted by an NEA member and that has not been published previously in a periodical having state or national distribution. (Please include your home address as well as your school, position, and zip code.)*

Don't Throw Away Those Old Textbooks

Any teacher who shares our reluctance to discard old texts may see a felicitous blend of economy and novelty in an idea developed by one of our graduate students.

In a demonstration class of sixth graders from a local school, taught by students in our educational psychology course, the curriculum aimed at improving reading and study skills. To help these pupils use the editorial clues provided by authors, a student teacher made very effective use of a collection of outdated, discarded social studies texts.

He took these books apart, removing the page numbers, title page, table of contents, and other headings. Then he gave each of the boys separate pages of a reading selection in random order and asked them to put the pages into proper sequence after reading only the top and bottom lines on each page.

As soon as all pupils had put the reading unit in correct sequence, they read the total passage. Next each boy chose what he considered to be an appropriate heading or title for the unit. Following a thorough discussion of various alternatives, in which each explained and defended his choice, they picked the most fitting title. At this point, the teacher provided a table of contents to let the boys compare its titles with their own. The boys then selected the title they believed was the correct one. Finally they checked this choice against an intact copy of the selection.

We tried the same activity with boys in remedial reading programs in a nearby youth camp and found it equally effective in stimulating interest in the task. It serves to encourage systematic scanning as well as close reading; subsequent discussions are unusually lively and extended.

—Linden D. Summers, Jr., *associate professor, Department of Education, Colgate University, Hamilton, New York.*

Handwoven Baskets

The only materials your students need to weave a basket are some bendable cardboard and yarn of any color.

Place a large plate on the cardboard and trace around it. Using a smaller plate, trace a second circle in the middle of the large one, allowing three or more inches between circles.

Cut out the large circle and then cut from the outer ring to the inner one an odd number of spokes half an inch wide and spaced an inch apart.

Weave the yarn in and out, around and around the spokes until you reach the top. Use a needle to sew yarn over and over the top row.

—Dorothy M. Meehling, *fourth grade teacher, (Montrose) Michigan School.*

Small Conference, Please!

All first grade teachers and those who have observed six-year-olds in school know that innumerable small problems can arise between children during any ordinary school day. Teachers also know how much time can be consumed trying to arbitrate in situations they did not witness themselves; trying to be fair to both parties without really knowing where to put the blame.

My plan for dealing with such situations works most of the time, and, if begun early in the school year, becomes more successful as time goes by.

When a child comes complaining about mistreatment from another child, I usually have a conversation like the following (details may differ) with both of the children involved:

Teacher: "I understand you two boys have a problem. What is your complaint, John?"

John: "Steve kicked me when I was in the bathroom trying to wash my hands."

Steve: "No, I didn't!"

Teacher: "John and Steve, I did not see what happened in the rest room, so I don't know who is right and who is wrong. But you boys ought to know, because *you* were there. I want you to stand over there (I designate a spot within sight in order to observe closely) and have a small conference to see if you can figure things out together. Talk it over quietly and when you can both come to me with a story you agree on, you may do so. I want you to decide who was right and who was wrong, or if *both* of you were in the wrong. I'll give you a few minutes. If you can't solve your problem alone, we may have to go to the principal's office."

Communication at first is understandably awkward and uncertain and, on occasion, embarrassing. But before long it goes more smoothly and satisfactorily as the children gain practice in putting their feelings and thoughts into words.

More likely than not, both parties come back and agree: "Steve did kick me in the rest room, but I tried to shove him away from the washbasin first. We both were wrong and we shouldn't have done it."

After we decide apologies are in order, and when they are accepted by the offended persons, the two shake hands and go back to their places.

I usually comment: "I am proud that you solved your problem together. You are really growing up now. Let's try to see that it doesn't happen again."

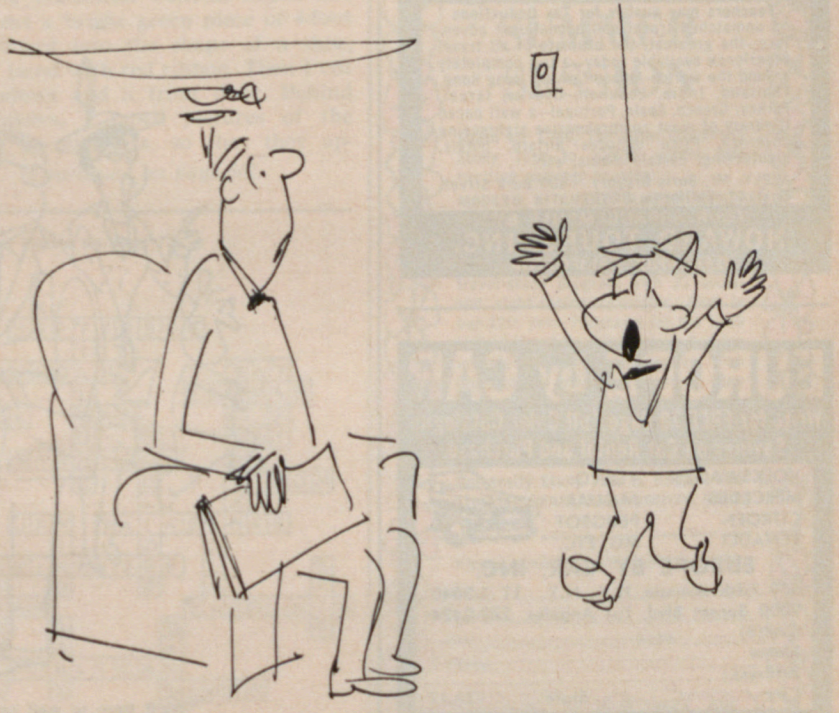
This procedure relieves the teacher of the awesome responsibility of playing King Solomon, and the children save face by avoiding reprimands. I couldn't teach without these small conferences.

—Wilma Lee Morgan, *first grade teacher, Humble (Texas) Elementary School.*

Make Your Own Dispenser

To make an inexpensive and convenient paper "handkerchief" dispenser for the classroom, decorate an empty three-

(Continued on page 84)



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IDEA EXCHANGE

(Continued from page 83)

pound shortening or coffee can and cut a round hole an inch in diameter in the middle of the plastic lid. Remove the core from a roll of two-ply toilet tissue and put the roll inside the can. From the center of the roll, pull the paper up through the hole in the lid. The children can take off as much tissue as they need, and the dispenser is easy to refill.

—Esther T. Barker, *speech therapist, Haywood County Consolidated Schools, Waynesville, North Carolina.*

Protect Your Favorite Pictures

The classroom teacher often finds one-of-a-kind pictures that can be used in class over and over again. Whether they are of the bulletin board variety or the kind he passes around, the teacher is concerned about keeping them in good condition.

If he sandwiches each of these pictures between two pieces of clear contact paper, which is inexpensive and can be found in most variety stores, he won't need to worry. It's a good idea to cut wide borders in order to provide a place for thumbtacks or staples.

Incidentally, I laminate my wallet cards in the same fashion to keep them from becoming dog-eared.

—Howard E. Faulkner, *teacher-coordinator, grades 3-5, Ocean Avenue School, Northport, New York.*

Inexpensive Teaching Tool

I have found that catalogs are an excellent teaching tool—in the elementary classroom.

All the teacher needs to do is to place several attractive ones on a utility table and let nature take its course. Sooner or later, children ask questions ranging from "What is C.O.D.?" to "What is flat paint?"

Catalogs are treasuries of useful words. Seed catalogs, for example, contain such terms as *annual, perennial, dwarf, hybrid, evergreen, citrus,* and so on, which lend themselves to many applications in elementary subjects.

An added plus is that catalogs are usually either free or inexpensive.

—Richard Swerdlin, *assistant professor of education, Southern Illinois University, Edwardsville.*

Take This Down

Children in the primary grades like to make up stories but often dislike the work that handwriting and spelling demand. This puts a damper on their creative writing.

When I taught second grade, I eliminated these hurdles by arranging for my pupils to have secretaries.

Sixth graders, who would otherwise have been spending 30 minutes in the school library, agreed to be the secretaries. We asked them to take dictation in manuscript writing. About half my class, working in pairs with the older children, would dictate stories, while I instructed the others in oral language. The next day, I would reverse the groups and another set of secretaries would come in.

My children had fun reading their stories to the class, but they got even more fun out of catching their secretaries in errors. The sixth graders, who enjoyed

"We'll have to wait until those school kids leave before we can be sure if the seismograph is registering an earthquake or not!"

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this activity as much as my second graders, would go back to their class with questions about spelling and sentence structure. (For my part, I turned over to their teacher the errors they made in spelling and punctuation as a guide for her language instruction.) In no time, they became meticulous proofreaders.

Real secretaries finally typed the children's stories and made them into booklets to be taken home.

After eight months of this, the second graders had progressed to the point of dismissing their secretaries. By then, they could write on their own every day without agonizing over the act of handwriting or the peculiarities of English spelling. Some even became secretaries to the first graders.

Youngsters on the primary level can think up fascinating, imaginative stories. They need only a bit of inspiration from the teacher, time set aside to write, and a chance to share their creations with classmates.

—Vida Jo Wooten, *coordinator of elementary instruction, Tyler (Texas) School System.*

A Stimulating Activity

I collect interesting items from current newspapers, magazines, or pamphlets, label them, and put them in a scrapbook.

In free time, any pupil may go to the scrapbook, find something that interests him, and read further on the subject or create stories or free verse—whatever comes to mind.

Later, I assemble this work and present it to the class.

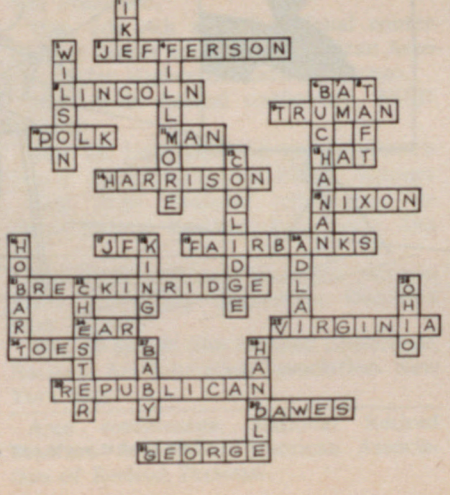
—Mary Belle Shaffer, *second grade teacher, Sugar Grove (Pennsylvania) School.*

Christmas Shoe

For my Christmas bulletin board last year, I cut a bright green piece of 4-foot poster board into the shape of a shoe, which I laced with red ribbon. Then I cut out windows and a front door. Behind the windows, I taped pictures of the children in my class, so that they ap-

(Continued on page 86)

Solution of Puzzle on page 73.



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IDEA EXCHANGE

(Continued from page 85)

peared to be looking out into the room.

From paper that was a deeper green than the shoe, I cut a Christmas tree, which I decorated with brightly colored paper ornaments. I made the tree sprout from the tip of the shoe's toe.

On top of the shoe, I put a white roof with a red chimney into which a toy Santa peered. In the doorway, I pasted the picture of a reindeer with a length of red ribbon attached to his neck. Just outside the doorway, I stationed a red Mother Hubbard figure who wore a white apron and had a picture of my face pasted in her bonnet. She held onto the reindeer's ribbon.

The children enjoyed this bulletin board immensely.

—Wilma Andrews, *fifth grade teacher, Southeast School, Decatur, Indiana.*

FRONTIERS OF MEDICINE

(Continued from page 26)

like computers to control malfunctioning body parts.

All of us who live long enough have intimations of aging. But we know very little about aging, other than its measurable manifestations. What is the biochemical process of growing old? Genetics, immunology, and chemistry furnish leads that remain to be spelled out in molecular language.

Perhaps body molecules become cross-linked in a chemical process resulting in an excess of connective tissue that gradually squeezes the working parts of vital organs. This, or processes unknown, may be programed into cells by our genes on a fateful time schedule. An excess of enzymes of our own making may spark an immunological reaction expressed in subtle deterioration. Even if we are not able to totally reverse these basically chemical phenomena, we should at least be able to slow them down so that people over 30 could be trusted by the young.

The frontiers of medicine are clouded by the vast areas of ignorance that new knowledge has disclosed. Medical progress presupposes the augmentation and support of education to gain ever sharper insights into the marvelous chemical processes we live by. Unexpected turns characterize research; to predict is hazardous. But prediction may serve a modest purpose if to some extent it mitigates dissatisfaction with the mortality of man. •

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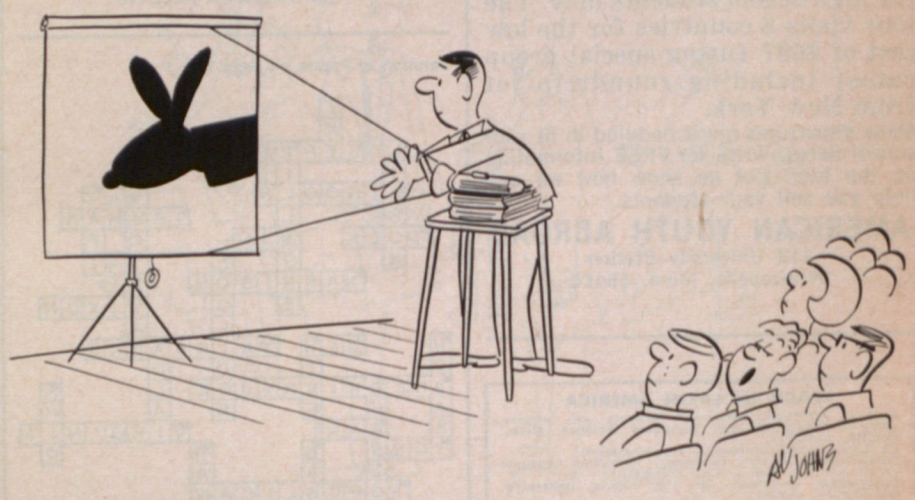


"This is what you'd call a very low budget class."

THE FACTS ARE...

This page lists the meetings sponsored by NEA and its units from December 26 through August 1. You may want to write in on the professional calendar on pages 43-46 (January-July) the names of the meetings you plan to attend. A later listing will appear in the May issue.

If you come across initials you don't understand, look back in the listing and you'll find them spelled out. If, without referring back, you know what all the initials mean, you're a professional-organization pro, sure enough!

—Mildred Sandison Fenner, editor.

Regional conventions, National Business Education Association:

Dec. 26-28: (North-Central Business Education Association) Chicago.

Mar. 19-21: (Western Business Education Association) Las Vegas.

June 26-28: (Mountain-Plains Business Education Association) Bismarck, N. Dak.

Dec. 27-30: Annual convention, Speech Association of America. Chicago.

Regional conferences, Association for Supervision and Curriculum Development:

Jan. 8-11: Elementary education conference, Elementary Education Council, in cooperation with EKNE. Washington, D.C.

Jan. 19-22: Change in Supervision, Commission on Problems of Supervisors & Curriculum Workers. Denver.

Jan. 22-25: Nature of Learner's Reality, Educational Media Commission. San Francisco.

Apr. 16-19: Student Unrest, Secondary Education Council. Atlanta.

Apr. 24-26: Western Research Institute, Research Council. San Francisco.

National conferences and district conventions, American Association for Health, Physical Education, and Recreation:

Jan. 12-15: National conference, secondary school athletic administrators. Washington, D.C.

Jan. 21-25: Fifth National Institute on Girls Sports. Urbana, Ill.

Feb. 20-24: Southern district convention. Memphis.

Mar. 27-29: Central district. St. Paul.

Mar. 27-30: Northwest district. Billings, Mont.

Mar. 28-Apr. 1: Southwest district. Sacramento, Calif.

Mar. 30-Apr. 2: National convention, Athletic & Recreation Federation of College Women. Tucson, Ariz.

Apr. 11-15: National convention with Eastern district, Boston.

Apr. 25-28: Midwest district convention. Charleston, W. Va.

Seminars of the National School Public Relations Association. Santa Barbara, Calif:

Jan. 12-15: "Development of School System Public Relations Program."

Feb. 2-5: "Educational Innovation Dissemination Strategies and Techniques."

Jan. 17-19: TIPupper classmen political clinic, Citizenship Committee. Cincinnati.

Regional conferences, Association of Classroom Teachers:

Jan. 30-Feb. 1: (South Central) New Orleans.

Mar. 20-22: (Southwest) Colorado Springs.

Apr. 10-12: (Northeast) Portland, Maine.

Apr. 17-19: (North Central) Sioux City, Iowa.

May 1-3: (Northwest) Pocatello, Idaho.

Division conventions, Music Educators National Conference:

Jan. 31-Feb. 3: (Eastern) Washington, D.C.

Mar. 6-9: (Southwestern) St. Louis.

Mar. 19-22: (Northwest) Eugene, Oreg.

Mar. 30-Apr. 2: (Western) Honolulu.

Apr. 16-19: (Southern) Mobile, Ala.

Apr. 26-29: (North Central) Fargo, N. Dak.

Feb. 15-19: National convention, American Association of School Administrators. Atlantic City.

Feb. 15-19: EKNE meeting during AASA convention. Atlantic City.

Meetings of the National Council of Teachers of Mathematics:

Feb. 21-23: Los Angeles.

Mar. 13-15: St Louis.

Mar. 20-22: Salt Lake City.

Mar. 20-22: Knoxville, Tenn.

Apr. 23-26: 47th annual meeting. Minneapolis.

Feb. 26-Mar. 1: NBEA meeting. Chicago.

Feb. 26-Mar. 1: Annual meeting, American Association of Colleges for Teacher Education. Chicago.

Feb. 26-Mar. 1: 49th annual conference, Association for Student Teaching. Chicago.

Mar. 1-5: Annual meeting, National Association of Secondary School Principals. San Francisco.

Mar. 2-5: 24th annual national conference on higher education. American Association for Higher Education. Chicago.

Mar. 16-20: Annual conference, ASCD. Chicago.

Mar. 18: Luncheon and panel presentation at ASCD conference, EKNE. Chicago.

Mar. 21-25: National convention, National Science Teachers Association. Dallas.

Mar. 28-30: TIPupper classmen political clinic, Citizenship Committee. Overland Park, Kans.

Mar. 30-Apr. 5: 10th biennial conference, National Art Education Association. New York City.

Area conferences, National Retired Teachers Association/American Association of Retired Persons:

Mar. 31-Apr. 2: New Orleans.

Apr. 24-26: Knoxville, Tenn.

May 22-24: Manchester, N.H.

June 26-28: Charleston, W. Va.

July 23-25: Peoria, Ill.

Apr. 6-12: 47th annual international convention, Council for Exceptional Children. Denver.

Apr. 7-11: Annual national convention, American Industrial Arts Association. Las Vegas.

Apr. 10-13: Annual convention, National Association of Women Deans and Counselors. Atlanta.

Apr. 11-13: Teachers-in-politics weekend, Citizenship Committee. Every state.

Regional drive-in conferences, sponsored by Department of Rural Education and AASA:

Apr. 13-15: (South Atlantic) Greenville, S.C.

Apr. 20-22: (Upper Midwest) Bismarck, N.D.

May 11-13: (Far West) Las Vegas.

Apr. 14-18: Annual meeting, Department of Elementary School Principals. Las Vegas.

Apr. 24-27: Regional conference, Michigan Association of Educational Secretaries. Detroit.

Apr. 27-May 1: Annual convention, Department of Audiovisual Instruction. Portland, Oreg.

NTL Institute for Applied Behavioral Science:

June 6-23: Midwest laboratories, Columbia, Mo.

June 15-27: Higher education laboratory & education consortium, Bethel, Maine.

June 15-27 and July 6-18: Human relations laboratories, Bethel and Plymouth, N.H.

June 30-July 25: Educational training consultants program, Bethel.

July 6-18: Educational leaders & community leadership laboratories, Bethel.

July 11-19: Midwest laboratory, Columbia, Mo.

July 13-25: Human relations & educational leaders laboratories, Lake Arrowhead, Calif.

Regional conference, NSTA:

June 12-18: (Pacific) Honolulu.

June 22-26: Annual conference. National Association of Student Councils, Baltimore.

June 22-28: Annual convention, ALA. Atlantic City.

June 26-28: 6th national workshop, EKNE. Washington, D.C.

June 29-30: ACT Representative Assembly. Philadelphia.

June 30: Open program & business meetings, EKNE. Philadelphia.

June 30: Summer conference, AAHE. Philadelphia.

June 30-July 5: Annual convention, NEA and departments. Philadelphia.

July 6-18: National conference, ACT. West Chester, Pa.

July 7-11: National seminar, NSPRA. Washington, D.C.

July 24-Aug. 1: National conference and institute, Educational Secretaries. St. U. of N.Y. at Albany.

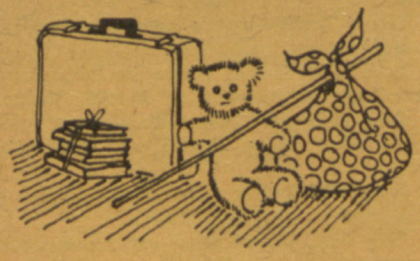
EXTRAS FOR OUR READERS

Supplement

For those interested in learning more about the gifted, TODAY'S EDUCATION offers a free single copy of a chart, "The Nature of the Gifted Child—Fact and Fancy," by George I. Thomas and Joseph Crescimbeni. Use the coupon to order your copy.

Mobile Children

We are hoping members will send in "Idea Exchange" items that explain how their schools help the child who must move away—how they prepare him for the change, and also what they do to welcome and orient the new child. By mobile children, we mean not only the children of migrant workers, but also those from stable homes who must move for different reasons.



Searching Mind

A number of readers have expressed the wish that our "Searching Mind" series be printed in booklet form. May we have more reactions on this point?

Reminder: Someone Abroad Would Like to Have Your Magazine

If you wish to begin sharing your copies of TODAY'S EDUCATION, we'll be glad to give you the name and address of a foreign colleague who is eager to receive them. Write to Dept. FA, TODAY'S EDUCATION, Room 801.

Instructions

If you are interested in trying out Arthur I. Berman's Seminar/Autolecture (see page 33), TODAY'S EDUCATION will send you a free copy of brief instructions on how to set up the autolecture. Just check the coupon and mail it in.

Puzzles

You may wish to receive a sheet of four crossword puzzles (Spanish-English, French-English, mythology, American poets) similar to the one on page 73 of this issue (and also created by gifted children in the Buffalo public schools). If so, mark the coupon and send it in.

1969 1969 1969 1969 1969 1969 1969 1969 1969

Pocket Appointment Calendars

In addition to the "Professional Calendar" on pages 43-46 of this issue, the JOURNAL editors extend season's greetings to NEA members by offering free TODAY'S EDUCATION pocket appointment calendars for 1969. The calendars come in popular bankbook size and are attractively printed. If accompanied by a stamped, self-addressed envelope, requests for single copies will be filled as long as the supply lasts. Write to Dept. PC, TODAY'S EDUCATION, Room 801.

Planning Calendars

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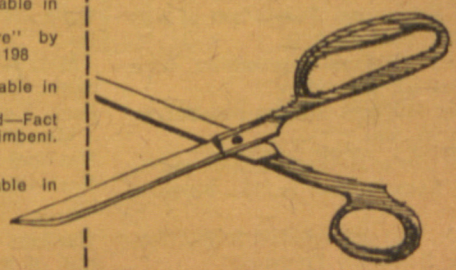

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In keeping with our motto, we now announce a significant new advancement in the area of fiscal responsibility. We are concerned that with the growth of overseas education, irresponsible operators of overseas educational programs could, through improvident financial management, default on their obligations to participants. Such a default would not only cause harm and financial loss to the injured participants, but would also reflect adversely on all international programs and impose a substantial danger to their continued growth and service.

In order to meet this challenge and in order to discharge our responsibility to our participants, the Foreign Study League is taking the following steps: (These fiscal controls have been patterned after regulations developed by the Civil Aeronautics Board for Inclusive Tour operators — 14 CFR Part 378.)

1–All monies collected from students will be placed in a special escrow account with a responsible bank. Withdrawals can only be made from that account to meet payment schedules for airlines, overseas schools, hotels and sightseeing services. The escrow agreement will specifically prohibit these funds from being used for current operations such as salaries, advertising, postage, rent, printing, etc.

2–The Foreign Study League will purchase a performance bond in the sum of $10,000 for each charter flight which we operate (up to a maximum of $100,000).

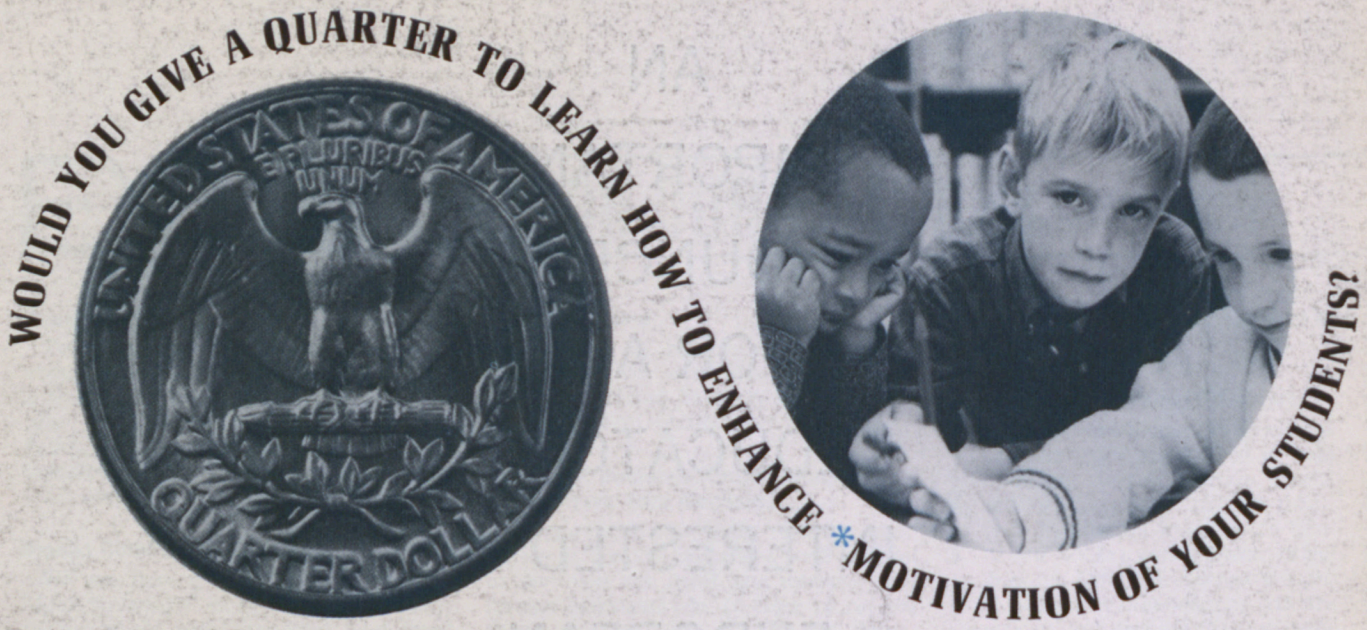
3–A copy of the escrow agreement of the bonding contract will be furnished to each participant in a Foreign Study League program.

We feel that the public has a right to demand this type of fiscal responsibility, and to our knowledge we are the only overseas study program which can provide such guarantees. We invite administrators, teachers, parents and students who wish to participate in an overseas program to investigate the many other advantages of dealing with the Foreign Study League.

The Foreign Study League is a private educational institution which provides young American students with the opportunity to attend summer schools abroad. Since 1964 the League has grown to be the world's largest and finest international school system, with a 1968 enrollment of more than 7,000 participants.

FOREIGN STUDY LEAGUE (formerly Foreign Language League)

For further information write: Foreign Study League, 164 East 3900 South, Salt Lake City, Utah 84107.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